

1 aware of dozens of these app stores myself. Some of these third-party app stores appear to be  
2 vectors for an elevated volume of pirated apps, malware, or inappropriate content.

3 72. A significant example of pirated apps is HappyMod, one of the most downloaded  
4 independent third-party app stores. HappyMod is dedicated to distributing “modified” versions of  
5 Android apps and games, many of which are merely apps that have been “scraped” or  
6 “repackaged” to allow users to obtain a paid app for free or to “unlock” premium in-app content  
7 items for free without paying the developer (e.g., a modified version of Netflix that allows you to  
8 get content for free without a subscription). For example, HappyMod distributes modified “free”  
9 versions of Minecraft and Grand Theft Auto San Andreas, while those apps are available on Play  
10 for \$6.99 and \$6.99, respectively. This is supported by the feedback we hear from top game  
11 developers, who express dissatisfaction with the scale of unauthorized distribution on Android, in  
12 contrast to iOS.

13 73. Like any app store, a third-party store may be a vector for malware, and many such  
14 stores do not have the same security processes as Play does. The Aptoide app store, for example,  
15 is widely known to distribute harmful apps. APKSOS.com is another example. In one publicly  
16 reported example in November 2022, it appears that a group of malicious apps that were designed  
17 to initiate unauthorized financial transfers from a user’s device were removed from the Play Store,  
18 but APKSOS.com continued to host one of those apps in its app store. SOCRadar, *Third-Party*  
19 *App Stores, Risks and Precautions*, <https://tinyurl.com/25djye76>. That app, “Phone AID, Cleaner,  
20 Booster 2.9 APK,” in fact is *still* available on APKSOS.com. In other cases, third-party store  
21 developers themselves have malicious intentions. One example was CepKutusu.com, a Turkish  
22 app store, which was intentionally designed to spread banking malware with every app  
23 downloaded from its platform. In the course of my work I have also seen an “app store” operated  
24 by a state-sponsored hacking group, with the sole purpose of delivering spyware to targeted  
25 individuals that pretends to be a legitimate messaging app.

26 74. As for mature content, one such example is the Nutaku Android store, which  
27 advertises itself as “the world’s largest 18+ gaming platform,” and features apps with adult  
28

1 content. Aptoide also carries adult apps including Pornhub and an unrestricted version of  
2 Telegram that allows adult content.

3 75. I cannot say how prevalent these issues are across the hundreds of third-party app  
4 stores, but there are at least some that distribute pirated, unsafe, or inappropriate content like the  
5 above examples.

6 76. Beyond third-party app stores specifically, I have been aware of many thousands of  
7 apps whose primary purpose, unbeknownst to the user, is to act as a distributor for other malicious  
8 apps. These types of apps are known as “hostile downloaders,” or “droppers,” and while they  
9 typically do not claim to be app stores—commonly they present themselves as utility apps, such as  
10 file managers or QR code scanners—from a technical perspective they are indistinguishable to app  
11 stores, as far as the Android operating system is concerned. Hostile downloaders remain a  
12 present-day threat for Android users that Google works hard to defend against through  
13 improvements to the Android operating system, as well as our malware detection systems. A  
14 recent example of a hostile downloader campaign that has sometimes bypassed Google’s defenses  
15 is the “Anatsa” banking trojan, which is first installed by a hostile downloader, and subsequently  
16 attempts to exfiltrate banking credentials in order to steal money from users. Should Google be  
17 ordered to make third-party stores available on Play, and enable the new install flows for these  
18 stores, it is essential that Play has policies in place to determine which apps are legitimate third-  
19 party app stores and are consequently eligible to take advantage of these new capabilities.

20 77. Finally, I note that these observations above reflect some of my understanding of  
21 the risk landscape of third-party stores in the present day. If Google is ordered to implement the  
22 remedies discussed in this declaration, including a separate remedy requiring Google to give its  
23 app catalog to third-party stores, that could change the landscape significantly by augmenting the  
24 volume of these potentially problematic third-party stores and empowering them with new  
25 capabilities that put users at risk.

26 \* \* \*



1 I declare under penalty of perjury under the laws of the United States of America that the  
2 foregoing is true and correct.

3 Executed on this 24th day of June 2024 (Pacific Time), in London, United Kingdom.

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DocuSigned by:  
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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**  
**SAN FRANCISCO DIVISION**

**IN RE GOOGLE PLAY STORE  
ANTITRUST LITIGATION**

THIS DOCUMENT RELATES TO:

*Epic Games Inc. v. Google LLC et al.*, Case  
No. 3:20-cv-05671-JD

Case No. 3:21-md-02981-JD

**DECLARATION OF CHRISTIAN  
CRAMER IN SUPPORT OF GOOGLE'S  
PROFFER REGARDING EPIC'S  
PROPOSED REMEDIES**

Judge: Hon. James Donato

**PUBLIC REDACTED VERSION**



**DECLARATION OF CHRISTIAN CRAMER**

1  
2 1. I am currently the Finance Director for Android Ecosystem (which includes Google  
3 Play) for Defendant Google LLC (along with Google-affiliated entities, “Google”). I have been  
4 employed by Google since September 2007 and have held my current position since February  
5 2024. Prior to my current position, from late 2020 to February 2024, I was the Finance Director  
6 for Google Play. Before that, I was the Finance Director for Platforms and Ecosystems (“P&E”)  
7 (which at the time included Google Play), from March 2017 to late 2020. Over the course of my  
8 employment at Google, I have acquired personal knowledge of Google’s practices and procedures  
9 concerning the maintenance of the confidentiality of its strategic, business, and marketing  
10 information.

11 2. The facts set forth here are true and correct to the best of my knowledge,  
12 information, and belief, and are based on my personal knowledge of Google’s policies, the  
13 materials provided to me and reviewed by me, and/or conversations with other knowledgeable  
14 Google employees. If called upon as a witness in this action, I could and would testify from my  
15 personal knowledge and knowledge acquired from sources with factual foundation.

**Process and Assumptions**

16  
17 3. I have been asked to estimate approximate costs for the commitment of certain  
18 Google resources, in the event that the Court were to order Google to undertake work to  
19 implement certain remedial measures proposed by Epic in *Epic Games v. Google*.

20 4. Below is a chart for each of three projects identified in declarations accompanying  
21 Google’s submission. The first is called “Catalog Access,” the second is called “Library Porting,”  
22 and the third is “Play Distribution of Third-Party Stores.” I do not have background knowledge  
23 about the nature of these specific projects. Instead, I have simply applied Google’s rate cards and  
24 standard cost information, of which I am personally familiar, to the specific categories of  
25 resources and Full Time Equivalents (“FTEs”) reflected in the declarations of Vitor Baccetti and  
26 Edward Cunningham.

27 5. For each chart, the information in columns A and B come directly from the  
28 declarations of Mr. Baccetti and Mr. Cunningham. I have used our rate cards and standard cost

1 information to populate column C with cost-per-year information, and have included Total figure  
2 ranges in column D. For each row, the Total figure (column D) represents the cost per year as a  
3 range (column C) multiplied by the duration required (column B). I have also include rows to sum  
4 up total figures for the various categories identified in the declarations.

5 6. I have applied several assumptions for the purpose of generating cost-per-year in  
6 column C.

7 7. First, I do not know what level or seniority each individual FTE would be for each  
8 project (e.g., a senior, mid-level, or junior level), so I have assumed an average salary for the  
9 given role based on the average employee level in the organization, unless otherwise specified as a  
10 “senior” resource.

11 8. Second, I do not know where the FTE employee would be located, but I assume it  
12 will be in the United States, and have applied a high-low range to account for different average  
13 FTE costs in different U.S. regions.

14 9. Third, new Google employees may be eligible for additional compensation in the  
15 form of equity awards that have yet to vest, so to be conservative in this estimate I am not  
16 applying any additional premium to these figures to account for such potential equity awards

17 10. Fourth, the rates are the “All-In” cost for an employee, this includes salary, bonus,  
18 benefits, office space, and IT equipment.

19 11. Finally, having reviewed the portion of the declaration of Mr. Baccetti relating to  
20 costs and timelines, I understand from paragraph 35 of his declaration that he has noted that it  
21 would be the Play team’s practice to consider an additional cost buffer of 20-30% for work of the  
22 type contemplated in his declaration. The cost calculation with that additional amount considered,  
23 20-30%, is also reflected below.

#### 24 Catalog Access

25 12. The below reflects costs associated with the resource commitments in Mr.  
26 Baccetti’s declaration, paragraph 33, adding columns C and D as well as the additional summation  
27 rows for the total and aggregate costs and the rows representing the buffer that Mr. Baccetti  
28 includes.

A	B	C	D
Resources / FTEs	Duration Required	\$ Per Year (Range)	Total \$ For Duration (Range)
Initial Scoping & Design			
1 Program Manager (PM)	3 months		
1 Senior Software Engineer (SWE)	3 months		
Implementation & Launch			
1 PM	6-9 months		
6 SWE	6-9 months		
2 SWE Eng Prod	6-9 months		
1 Technical Program Manager (TPM)	6-9 months		
1 Tech Writer (TW)	6-9 months		
1 Legal Counsel	6-9 months		
2 XFN (Policy, Program Manager)	6-9 months		
1 PM	6-9 months		
1 SWE	6-9 months		
1 PM	6-9 months		
5 SWE	6-9 months		
1 SWE Eng Prod	6-9 months		
1 UX Designer	6-9 months		
1 TPM	6-9 months		
2 Business Dev Managers	6-9 months		
Mechanism for More Frequent Updates			
7 SWE	6-9 months		
2 SWE Eng Prod	6-9 months		
1 TPM	6-9 months		



Onboarding of Stores			
3 Technical Solutions Consultant/Engineer (TSC/TSE)	3 months		
1 TPM	3 months		
Build & Implement Charging Model			
7 SWE	6-9 months		
4 SWE	6-9 months		
1 TPM	6-9 months		
1 PM	6-9 months		
2 Finance	6-9 months		
2 Tax	6-9 months		
2 Legal Counsel	6-9 months		
Policy Enforcement			
2 SWE	6 months		
Estimated Build Cost:			13.6M-23.7M
Ongoing Maintenance & Policy Enforcement Support			
2 Software Reliability Engineer (SRE)	2-6 years		
3 SWE	2-6 years		
1 SWE Eng	2-6 years		
2 Trust & Safety (T&S)	2-6 years		
Estimated Maintenance Cost:			7.5M - 27M
Aggregate Build & Maintenance Total Cost			21.1M-50.7M
Aggregate + 20%			25.4M-60.8M
Aggregate + 30%			27.5M-65.9M

### Library Porting

13. The below reflects costs associated with the resource commitments in Mr. Cunningham's declaration, paragraph 40, adding columns C and D as well as the additional summation rows for the total and aggregate costs.

A	B	C	D
Resources / FTEs	Duration Required	\$ Per Year (Range)	Total \$ For Duration (Range)
Solution Build			
2 software engineers	1 year		
1 user experience designer	3 months		
1 user experience researcher	2 months		
1 product manager	6 months		
1 developer relations engineer	1 month		
1 technical solutions consultant	3 months		
Estimated Build Cost			1.5M-1.8M
Ongoing Maintenance & Support			
1 software engineer	2 mos./yr (2-6 years)		
Estimated Maintenance Cost			157K-563K
Aggregate Build & Maintenance Cost			1.7M-2.4M

### Play Distribution of Third-Party Stores

14. The below reflects costs associated with the resource commitments in Mr. Baccetti's declaration, paragraph 43, adding columns C and D as well as the additional summation rows for the total and aggregate costs and the rows representing the buffer that Mr. Baccetti includes.

A	B	C	D
Resources / FTEs	Duration Required	\$ Per Year (Range)	Total \$ For Duration (Range)
Initial Scoping & Design			
1 PM	3 months		
1 PM	3 months		
1 TPM	3 months		
1 Senior SWE	3 months		
1 Senior SWE	3 months		
1 Legal Counsel	3 months		
1 Policy FTE	3 months		
Implementation & Launch - Play Console			
1 PM	9 months		
4 SWE	6-9 months		
1 SWE Eng Prod	6 months		
1 UX Designer	6 months		
1 TPM	9 months		
1 Legal Counsel	6-9 months		
Implementation & Launch - Play Store Client			
1 PM	9 months		
6 SWE	6-9 months		
1 SWE Eng Prod	6 months		
1 UX Designer	6 months		
1 UX Researcher	6 months		
1 TPM	9 months		
1 Legal Counsel	6-9 months		
Implementation & Launch - Install APIs			



1	1 PM	6 months		
2	2 SWE	6 months		
3	1 SWE Eng Prod	6 months		
4	Policy Design & Launch			
5	1 Policy FTE	9 months		
6				
7	1 PM	9 months		
8	3 SWE	9 months		
9	1 PgM	9 months		
10	1 Legal Counsel	9 months		
11	1 XFN (Government Affairs and Public Policy)	9 months		
12				
13	1 Ops FTE	9 months		
14	App Store Review Program Launch			
15	3 PgM	9 months		
16	3 TSC	9 months		
17	8 T&S	9 months		
18	4 TVC (Temporary Vendor Contractor)	9 months		
19	Estimated Build Cost			15.1M-18.5M
20	Ongoing Maintenance - Engineering Support			
21	2 SWE	2-6 years		
22	1 PM	2-6 years		
23	1 SWE Eng Prod	2-6 years		
24	Ongoing Maintenance - App Store Review Program Support			
25	1 PgM	2-6 years		
26	1 T&S	2-6 years		
27	1 TVC	2-6 years		
28				

Ongoing Maintenance - Policy & Policy Enforcement Support			
1 Policy FTE	2-6 years		
1 PM	2-6 years		
1 SWE	2-6 years		
1 Ops FTE	2-6 years		
Estimated Maintenance Cost			9.1M-32.2M
Aggregate Build & Maintenance Cost			24.2M-50.7M
Aggregate + 20%			28.9M-60.9M
Aggregate + 30%			31.4M-66.7M

15. The below reflects costs associated with the resource commitments in Mr. Cunningham's declaration, paragraph 66.

A	B	C	D
Resources / FTEs	Duration Required	\$ Per Year (Range)	Total \$ For Duration (Range)
Initial Build & Implementation			
1 SWE	1 year		
1 UXD	3 months		
1 UXR	1 month		
Estimated Build Cost			628K - 751K
Ongoing Maintenance			
1 SWE	1 mo./yr (2-6) years		
Estimated Maintenance Cost			79K - 282K
Aggregate Build & Maintenance Cost			707K-1.03M

\* \* \*

Executed on this 24th day of June 2024, in Mountain View, California.

DocuSigned by:  
Christian Cramer  
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## **EXHIBIT N**

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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**  
**SAN FRANCISCO DIVISION**

**IN RE GOOGLE PLAY STORE  
ANTITRUST LITIGATION**

THIS DOCUMENT RELATES TO:

*Epic Games Inc. v. Google LLC et al.*, Case  
No. 3:20-cv-05671-JD

Case No. 3:21-md-02981-JD

**DECLARATION OF DAVID  
KLEIDERMACHER IN SUPPORT OF  
GOOGLE'S PROFFER REGARDING  
EPIC'S PROPOSED REMEDIES**

Judge: Hon. James Donato

**PUBLIC REDACTED VERSION**





1 reviewing the apps hosted by that store, Google itself would be exposing Android users and its  
2 own Play customers to potentially significant risks that are outside Google’s ability to manage.

3 6. The proposed injunction’s failure to define an “app store” amplifies these risks  
4 further. At a software level, Android does not have the concept of an “app store.” Instead, the  
5 operating system merely distinguishes between apps that have the permission to install other apps  
6 and apps that lack that permission. To the extent an “app store” in Epic’s proposed injunction  
7 merely means “any app capable of installing other apps,” then the injunction will provide a  
8 powerful new tool for bad actors to harm users. This is because any app—including harmful or  
9 malicious apps—would be able to elect to become an app installer and thereby unlock an  
10 entitlement to be (a) distributed by Play, (b) access Play’s catalog, and (c) request library porting  
11 of the user’s apps.

12 **Vetting Apps of Third-Party Stores Distributed by Play**

13 7. Because there does not exist any practical means of obtaining independent  
14 confidence in the safety of a third-party store, to manage this risk Google would apply its own  
15 Trust & Safety processes—including app and developer review—to review those stores’ apps.  
16 Thus, if Google were ordered to permit the distribution of third-party app stores through Play,  
17 Google would likely extend its existing app review functions for Play apps to vet the catalog of  
18 apps distributed by third-party stores.

19 8. Google Play’s app review process for Play apps is labor-intensive. As I testified at  
20 trial, there is a human review for all new apps to determine compliance with a number of Play’s  
21 policies. There is also a sophisticated infrastructure that conducts a machine-based review,  
22 examining the application and developer for signals of risk. If a risk is identified by our  
23 automated processes, and our algorithms cannot determine at a very high degree of precision  
24 whether an app is malicious, then the app will be further evaluated by a human. Google also  
25 reviews all app updates using a machine-based review, and the update may be flagged for  
26 additional human review if our system determines that the update is suspicious or may violate our  
27 policies. An app or update is not published until Play completes the above review process.



1 Google conducts the above review for millions of new apps and updates every year. (By way of  
2 example, in March 2024 alone we reviewed nearly 2.7 million new apps and updates).

3 9. If Google were ordered to distribute third-party app stores through the Play store,  
4 then Google would extend this process to the catalogs of stores that Play is required to distribute.  
5 If Google did this, then in order to continue to be distributed on Play, the third-party store would  
6 have to allow Google to perform this app review for all apps and updates that the third-party store  
7 intended to publish. No app or update could be published on the third-party storefront distributed  
8 through Play unless Google had cleared that app or update pursuant to Google's policies, which  
9 would include at least the same safety and content policies that Google applies to apps distributed  
10 directly on Play.

11 10. Google may also modify Android to require that no app can be installed from such  
12 a Play-distributed store unless it has been approved pursuant to Google's app review process.  
13 This may require technical and product collaboration between Google and third-party stores  
14 distributed through Play, as Play would effectively be in a position of approving the catalog of  
15 competitor stores.

16 ***Review of Third-Party Store Behavior***

17 11. In addition to vetting the third-party app catalog, Google also would likely require  
18 the app store itself to follow Play's policies. For example, Play has privacy policies and policies  
19 requiring disclosure of certain information to the user. Because it would be distributed by Play,  
20 the app store would likely need to adhere to these policies. Google would also have to develop  
21 and implement behavior policies for third party app stores distributed through Play.

22 12. Google may also consider extending aspects of its Mobile Bundled Apps (MBA)  
23 Policies, which apply to all preloaded apps, to other apps and app stores regardless of source, in  
24 order to respond to the increased risk that this remedy would have for users. Google may also  
25 consider revising its Android policies relating to malware and mobile unwanted software to cover  
26 the behavior of third-party stores. Google's current MBA Policies are attached as [Exhibit B](#).

27 13. For example, whatever remedy Google must adopt, one protection that Google  
28 needs to retain at the operating system level is the prohibition on non-preloaded apps

1 automatically and silently installing other apps without user consent (i.e., when the user has not  
2 expressed an intention to install). Automatic and unconsented installs are a significant security  
3 risk. One recent example was the Redstone installer, a pre-installed system app on Android  
4 devices sold in Germany that automatically installed malware on users' devices.

5 *Costs*

6 14. As the head of Android security and privacy engineering, I am familiar with the  
7 costs for reviewing Play apps, and the rough breakdown of those costs. I estimate that the total  
8 cost to run app review, on an annual basis, is roughly [REDACTED] Below is a rough estimate of  
9 how these costs are allocated for Play app review today.

10 Team / Function	\$/year
11 [REDACTED]	[REDACTED]
12 [REDACTED]	
13 [REDACTED]	
14 [REDACTED]	
15 [REDACTED]	
16 [REDACTED]	
17 [REDACTED]	
18 [REDACTED]	
19 [REDACTED]	[REDACTED]
20 [REDACTED]	
21 [REDACTED]	[REDACTED]
22 [REDACTED]	
23 [REDACTED]	
24 [REDACTED]	[REDACTED]
25 [REDACTED]	
26 [REDACTED]	
27 [REDACTED]	
28 [REDACTED]	

1		
2		
3		
4	TOTAL	

15. It is difficult to determine with precision the costs of extending the Play's app review efforts to third-party store catalogs.

16. First, it is difficult to predict how many new apps and updates Google will have to review after this injunction takes effect.

17. Second, it is difficult to distinguish between costs that are fixed, on the one hand, and variable costs that would increase with each incremental addition in new app submissions to review, on the other. While all of the above costs are variable (i.e., they will increase as Google must expand its operations to review additional apps), not all of them will increase linearly with each incremental new app submission that Google must review.

18. Finally, because we would be reviewing apps that are not typically submitted to Play, but to stores with lower safety and content standards than Play has, I expect that some aspects of the work outlined above will increase at a disproportionately rapid pace. In other words, even a small increase in the number of apps we review from third-party stores may result in a disproportionately large additional review effort by some of our teams, because those apps may present new attack scenarios that we have yet to analyze. I do not know exactly what that cost increase would look like because we have not yet done such a comprehensive review of third-party catalogs.

19. Moreover, the changes being considered are significant and novel, and thus any cost estimate I offer is necessarily tentative and may not end up being accurate if Google is forced to make these changes.

20. That being said, based on my experience in this industry and as the head of security and privacy engineering at Android for over seven years, including experience working with other app stores to address risky apps in their catalog that present risks for Android users, I believe a 20



1 percent growth in the above costs to be a reasonably likely possibility. That is a conservative  
2 estimate, depending on the number of additional apps proposed for publication by Play-distributed  
3 third-party stores, our cost increase may be significantly higher.

4 21. Assuming a conservative 20 percent cost increase, given that our existing costs are  
5 approximately [REDACTED] for app review efforts (described above), I estimate a cost increase of  
6 over [REDACTED]

#### 7 *Timeline*

8 22. To implement the above changes, I estimate it will take roughly one year, which is  
9 a conservative estimate. Hiring and training additional individuals to address the growing trust  
10 and safety needs described above—including likely hundreds of additional reviewers—takes a  
11 significant amount of time. In the past, it has taken at least that amount of time to hire and train  
12 fewer reviewers than what the above changes would likely require. In addition, making major  
13 changes to Play and/or Android policies that impact all Android app developers is a time-intensive  
14 process, involving cross-functional planning and developer feedback cycles. Those changes also  
15 need to account for the time it takes for app stores to change their existing practices to become  
16 compliant with new policies, which in some circumstances can take many months.

#### 17 *Alternative Measures Are Insufficient*

18 23. I understand that one alternative to third-party catalog review may be to display a  
19 warning screen to the user informing them that they are entering, or installing an app from, another  
20 app store and consequently Play is not responsible for whatever harm may occur thereafter. In my  
21 view as the head of engineering for Android security, that is not sufficient. As an initial matter,  
22 when viewed in tandem with Epic's proposed catalog access remedy, it may be that a significant  
23 number of the apps that a user sees in a third-party storefront actually *do* come from Play. More  
24 fundamentally, unlike when a user sideloads a third-party store which does not involve Play, this  
25 particular remedy would require the Google Play store itself to install the third-party store on the  
26 device, so Google would be involved in facilitating the later installation of potentially harmful,  
27 pirated, or inappropriate apps. Users, including parents of children who may access inappropriate  
28 or harmful apps, may complain to Google about subsequent security or content issues because of



1 Play’s involvement in facilitating the install. Google therefore has a legitimate interest in  
2 protecting not only Android, but also its own “Google Play” brand, and for that reason it may need  
3 to undertake the same review process for third-party catalogs as it does for its own Play apps.

4 24. Another alternative to third-party catalog review may be to rely on the scans that  
5 Google Play Protect (“GPP”) conducts for apps that are distributed outside of Play, but I also do  
6 not think that would be sufficient to protect users. GPP scans for known malware on an  
7 established “blocklist,” and for unknown malware via machine flags, but the review resources for  
8 unknown malware scans are relatively less extensive. And as I testified at trial, we receive  
9 important signals about an app’s potential security risks because of the fact that the app and its  
10 developer are on Play. So if an app is distributed off-Play (including in a Play-distributed third-  
11 party storefront), then Google Play Protect has much less capability of detecting potential harm to  
12 users. Finally, Google Play Protect’s automated scans are not able to make judgments with  
13 certainty about content policy violations and other issues, which is why we have human review for  
14 Play apps and updates that are flagged.

15 \* \* \*

16 I declare under penalty of perjury under the laws of the United States of America that the  
17 foregoing is true and correct.

18 Executed on this 24th day of June 2024, in Palo Alto, CA.

19  
20  \_\_\_\_\_  
21 David Kleidermacher  
22 BD7F8615474F4E5...

## **EXHIBIT O**

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

IN RE GOOGLE PLAY STORE  
ANTITRUST LITIGATION

MDL Case No. [21-md-02981-JD](#)

Member Case No. 20-cv-05671-JD

**ORDER RE GOOGLE'S RENEWED  
MOTION FOR JUDGMENT AS  
MATTER OF LAW OR FOR NEW  
TRIAL IN *EPIC* CASE**

After 15 days of trial, a jury found in favor of plaintiff Epic Games Inc. on its antitrust claims against Google. *See* Dkt. No. 866.<sup>1</sup> Google had moved for judgment as a matter of law at an appropriate stage of the trial, which the Court denied. Dkt. Nos. 825, 831. Google renewed the motion post-verdict under Federal Rule of Civil Procedure 50(b), with a motion in the alternative for a new trial under Rule 59. Dkt. No. 925. The Court denied both motions. Dkt. No. 951. This order provides a detailed explanation for that decision.

**BACKGROUND**

The Court presented the background of this multidistrict antitrust litigation in other orders. *See, e.g.*, Dkt. Nos. 383, 588. In pertinent part, Epic is a well-known video game and software developer, and its apps include Fortnite, a popular online game. Fortnite can be played on a variety of consoles and devices, including smartphones running the Android mobile operating system.

Epic distributed a Fortnite Android app through the Google Play Store for a handful of months starting in April 2020, until Epic's relationship with Google broke down in August 2020.

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<sup>1</sup> All docket number references are to the ECF docket for *In re Google Play Store Antitrust Litigation*, Case No. 21-md-02981-JD.

1 A particular sticking point was Epic’s objection to Google’s requirement that Epic use Google’s  
2 billing system and pay Google a 30% fee on all in-app purchases made by Fortnite users. Epic  
3 wanted to use its own in-app payment solution and not pay Google a 30% cut, which Google  
4 refused to allow. Epic then deployed a “hotfix,” which was in effect a covert app update that  
5 allowed Fortnite users to use Epic’s payment system. Google responded by removing Fortnite  
6 from the Google Play Store.

7 On the day that Fortnite was removed from the Google Play Store, Epic filed this lawsuit  
8 against Google LLC and certain of its affiliates alleging that Google had engaged in  
9 anticompetitive conduct in violation of the antitrust laws in connection with the Google Play  
10 Store. Dkt. No. 1. As alleged in its second amended complaint (SAC), Epic presented claims  
11 under Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1, 2; the California Cartwright Act, Cal.  
12 Bus. & Prof. Code § 16700 et seq.; and the California Unfair Competition Law (UCL), Cal. Bus.  
13 & Prof. Code § 17200 et seq. Dkt. No. 378. Epic sought injunctive relief only, and no monetary  
14 damages. *Id.* Google filed counterclaims against Epic, including for breach of the Google Play  
15 Developer Distribution Agreement (DDA). Dkt. No. 386.

16 Epic’s lawsuit was consolidated into a multidistrict litigation action along with similar  
17 antitrust complaints filed by Google Play Store users and developers, and the attorneys general of  
18 many states. A substantial period of litigation ensued for all of the member cases, and several  
19 important issues were resolved in the pretrial stage. One was a determination that Google had  
20 willfully failed to preserve relevant, substantive business communications that were made by  
21 employees on the Google Chat system. This determination required an extensive inquiry by the  
22 Court that culminated in an evidentiary hearing featuring witness testimony and documents, and  
23 extensive findings of fact. *See* Dkt. No. 469. Testimony at trial adduced even more troubling  
24 evidence of improper assertions of the attorney-client privilege by Google’s employees, including  
25 its CEO, to keep communications secret, and a widespread understanding within the company that  
26 discussions of sensitive topics should be done in a way that evaded preservation. *See, e.g.,* Trial  
27  
28



Tr. at 964:21-23, 991:16-992:8, 1075:20-1076:12, 1321:17-24.<sup>2</sup> Another important pretrial determination was whether Google could evade a jury altogether by asking for a bench trial at the very last moment. The Court concluded, based on Google’s own conduct, that it had consented to a jury trial. *See id.* at 6:13-7:16.

In time, the other cases went into settlement proceedings. Epic’s case was tried by a jury of nine citizens in November and December 2023. The parties put on forty-five witnesses, including nine expert witnesses, over the course of fifteen days of testimony. More than three hundred documents were admitted into evidence. *See* Dkt. Nos. 622, 623, 624. The final jury instructions totaled fifty-five pages. Dkt. No. 850. The instructions were based on extensive discussions with, and submissions by, the parties. *See, e.g.*, Dkt. Nos. 487, 528, 554, 564, 847, 848, 849.

At the conclusion of deliberations, the jury returned a unanimous verdict in favor of Epic. Dkt. No. 866. For the monopolization claim under Section 2 of the Sherman Act, the jury found that Epic had proved two relevant product markets: a market for the distribution of Android apps, and for Android in-app billing services for digital goods and services transactions. The jury also found that Epic had proved for both of these markets that the geographic scope was worldwide excluding China. The jury further concluded that Epic had proved that Google willfully acquired or maintained monopoly power by engaging in anticompetitive conduct in each of the product markets, and that Epic had proved it was injured as a result of Google’s violation of the antitrust laws. *Id.* at 1-4. For the unlawful restraint of trade claim under Section 1 of the Sherman Act and California state law, the jury found that Epic had proved that Google entered into one or more agreements that unreasonably restrained trade in the same two product markets as for the

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<sup>2</sup> “Trial Tr.” references are to the trial transcript, which consists of 17 volumes with 3,442 total pages that are consecutively numbered. The transcript can be found at Dkt. No. 834 (Vol. 1; pages 1-116); Dkt. No. 835 (Vol. 2; pages 117-322); Dkt. No. 836 (Vol. 3; pages 323-578); Dkt. No. 837 (Vol. 4; pages 579-788); Dkt. No. 838 (Vol. 5; pages 789-1036); Dkt. No. 839 (Vol. 6; pages 1037-1302); Dkt. No. 840 (Vol. 7; pages 1303-1539); Dkt. No. 841 (Vol. 8; pages 1540-1785); Dkt. No. 842 (Vol. 9; pages 1786-1866); Dkt. No. 843 (Vol. 10; pages 1867-2103); Dkt. No. 844 (Vol. 11; pages 2104-2291); Dkt. No. 845 (Vol. 12; pages 2292-2518); Dkt. No. 846 (Vol. 13; pages 2519-2763); Dkt. No. 847 (Vol. 14; pages 2764-2854); Dkt. No. 848 (Vol. 15; pages 2855-3065); Dkt. No. 849 (Vol. 16; pages 3066-3293); and Dkt. No. 867 (Vol. 17; pages 3294-3442).

1 monopolization claim. The jury determined that the illegal agreements were Google's DDA  
2 agreements; agreements with alleged competitors or potential competitors under Project Hug and  
3 the Games Velocity Program; and agreements with original equipment manufacturers (OEMs) that  
4 sell mobile devices, including the MADA and RSA agreements. Epic was found to have proved  
5 antitrust injury from these violations. *Id.* at 5-6. For the tying claim under Section 1 of the  
6 Sherman Act and California law, the jury determined that Epic had proved that Google unlawfully  
7 tied the use of the Google Play Store to the use of Google Play Billing, and that Epic again had  
8 been injured by this conduct. *Id.* at 7.

9 Epic's UCL claim was not presented to the jury and was reserved for the Court's decision.  
10 Google's breach of contract counterclaim also was not presented to the jury pursuant to the  
11 parties' agreement, and the Court will decide Epic's illegality defense, with the parties' stipulated  
12 facts to be treated as proved. *See* Dkt. No. 850 at 1. Also reserved for the Court's decision is the  
13 issue of an injunctive remedy under the Sherman Act and Cartwright Act in light of the jury's  
14 verdict. The remedy proceedings are currently underway. *See* Dkt. No. 978.

15 Google has fired a barrage of objections and allegations of error in an effort to escape the  
16 judgment of the jury. This approach has been Google's modus operandi throughout the case, and  
17 often results in headline-style arguments that lack useful development. The 90 pages of objections  
18 that Google filed to Epic's proposed injunction in the remedy proceedings are the latest  
19 manifestation of this problem. *See* Dkt. No. 958. In the ensuing discussion, the Court addresses  
20 Google's attacks on the verdict even when Google's argument was little more than a passing  
21 comment or two.

22 As the Supreme Court has observed, the "[d]etermination of whether a new trial should be  
23 granted or a judgment entered under Rule 50(b) calls for the judgment in the first instance of the  
24 judge who saw and heard the witnesses and has the feel of the case which no appellate printed  
25 transcript can impart." *Cone v. West Virginia Pulp & Paper Co.*, 330 U.S. 212, 216 (1947)  
26 (citation omitted). It is on this basis, and the trial record as a whole, that the Court concludes  
27 Google is not entitled to undo the jury's verdict under Rule 50(b) or Rule 59.  
28



## LEGAL STANDARDS

Under Rule 50(b), a party that has previously made a motion for judgment as a matter of law during a jury trial, as Google did, may “file a renewed motion for judgment as a matter of law and may include an alternative or joint request for a new trial under Rule 59.” Fed. R. Civ. P. 50(b). Judgment as a matter of law is appropriate when “the evidence, construed in the light most favorable to the nonmoving party, permits only one reasonable conclusion, and that conclusion is contrary to that of the jury.” *White v. Ford Motor Co.*, 312 F.3d 998, 1010 (9th Cir. 2002) (citation omitted); *see also Lakeside-Scott v. Multnomah Cnty.*, 556 F.3d 797, 803 (9th Cir. 2009) (“JMOL is . . . appropriate when the jury could have relied only on speculation to reach its verdict.”). The “district court must uphold the jury’s award if there was any ‘legally sufficient basis’ to support it.” *Experience Hendrix L.L.C. v. Hendrixlicensing.com Ltd*, 762 F.3d 829, 842 (9th Cir. 2014) (citation omitted); *see also Dunlap v. Liberty Nat. Prod., Inc.*, 878 F.3d 794, 797 (9th Cir. 2017) (“A jury’s verdict must be upheld if it is supported by substantial evidence that is adequate to support the jury’s findings, even if contrary findings are also possible.”) (citation omitted). In making this determination, the Court is to “consider[] all of the evidence in the record, drawing all reasonable inferences in favor of the nonmoving party,” and it “may not make any credibility determinations or reweigh the evidence.” *Experience Hendrix*, 762 F.3d at 842. Put more plainly, the Court must “draw all inferences in favor of the verdict.” *Id.* at 845.

Rule 59 permits the Court to grant a new trial on all or some of the issues, and to any party, “for any reason for which a new trial has heretofore been granted in an action at law in federal court.” Fed. R. Civ. P. 59(a)(1)(A). Although for a Rule 59 motion, the Court is “not required to view the trial evidence in the light most favorable to the verdict,” *Experience Hendrix*, 762 F.3d at 842, the Court “may not grant a new trial simply because it would have arrived at a different verdict.” *Silver Sage Partners, Ltd. v. City of Desert Hot Springs*, 251 F.3d 814, 819 (9th Cir. 2001). Our circuit has stated that “[a] trial court may grant a new trial only if the verdict is against the clear weight of the evidence.” *Pavao v. Pagay*, 307 F.3d 915, 918 (9th Cir. 2002) (citing *Silver Sage*, 251 F.3d at 818-19).

Google presented its JMOL and new trial arguments in a single, interwoven fashion. *See* Dkt. No. 925. The Court will follow suit, while being mindful of the different standards that govern each rule.

## DISCUSSION

### I. ANDROID-ONLY RELEVANT MARKETS

For the monopolization claim, the jury found that Epic had proved the existence of two relevant product markets: (1) an “Android app distribution market,” and (2) a market for “Android in-app billing services for digital goods and services transactions.” Dkt. No. 866 at 3 (Question No. 2). The jury found the same two relevant product markets for Epic’s unlawful restraint of trade claim. *See id.* at 6 (Question No. 8). Google proposes two reasons why, in its view, Epic should not have been permitted to argue for these relevant markets that were “limited to Android devices.” Dkt. No. 925 at 1-7.

#### A. Issue Preclusion

To start, Google says that it is entitled to judgment as a matter of law on all claims submitted to the jury because of the preclusive effect of *Epic Games, Inc. v. Apple Inc.* (“*Apple I*”), 559 F. Supp. 3d 898 (N.D. Cal. 2021), and *Epic Games Inc. v. Apple Inc.* (“*Apple II*”), 67 F.4th 946 (9th Cir. 2023), *cert. denied*, 144 S. Ct. 682 (2024). *Apple II* affirmed in part and reversed in part *Apple I*. Google says that the *Apple I* court found a “market for mobile game transactions in which both Google and Apple competed,” which was a market definition the circuit affirmed. Dkt. No. 925 at 2-3. Consequently, in Google’s view, Epic had “already litigated and lost” the issue of “competition between Apple’s App Store and Google Play.” *Id.* Because Epic did not propose at trial a market that included Apple, Google contends that Epic failed to prove a valid relevant market at all, which necessarily doomed all of its antitrust claims. *Id.* at 4.

This is not the first time Google has tried to make this point. It is in effect a re-do of the same argument that the Court rejected in prior proceedings because Google had failed to establish the elements of preclusion. Dkt. No. 700 at 2. Nothing has happened since to change the Court’s conclusion.



1 “Issue preclusion, which bars the relitigation of issues actually adjudicated in previous  
2 litigation, applies where four conditions are met: (1) the issue at stake was identical in both  
3 proceedings; (2) the issue was actually litigated and decided in the prior proceedings; (3) there was  
4 a full and fair opportunity to litigate the issue; and (4) the issue was necessary to decide the  
5 merits.” *Snoqualmie Indian Tribe v. Washington*, 8 F.4th 853, 864 (9th Cir. 2021) (cleaned up).

6 The market definition issues that were litigated in *Apple I* and *Apple II* were plainly not the  
7 same as the issues litigated here. In the case against Apple, Epic “proposed two single-brand  
8 markets: the aftermarkets for iOS app distribution and iOS in-app payment solutions, derived from  
9 a foremarket for smartphone operating systems.” *Apple II*, 67 F.4th at 970 (emphasis omitted).  
10 The district court rejected Epic’s proposed single-brand markets mainly because there was a  
11 “failure of proof.” *Id.* Epic “presented no evidence regarding whether consumers unknowingly  
12 lock themselves into Apple’s app-distribution and IAP restrictions when they buy iOS devices.”  
13 *Id.* On appeal, the circuit court determined that the district court “did not clearly err in rejecting  
14 Epic’s proposed relevant markets”; “[i]n particular, Epic failed to produce any evidence showing  
15 -- as our precedent requires -- that consumers are generally unaware of Apple’s app-distribution  
16 and IAP restrictions when they purchase iOS devices.” *Id.* at 973.

17 Epic took a very different approach to the markets in this case. It did not, for obvious  
18 reasons in a case that did not include Apple, advocate for “aftermarkets for iOS app distribution  
19 and iOS in-app payment solutions, derived from a foremarket for” iOS devices. *Id.* at 970  
20 (emphasis omitted). Nor did it argue for aftermarkets for Android app distribution and Android  
21 in-app payment solutions, derived from a foremarket for Android devices. It took a wholly  
22 different approach for the antitrust claims against Google, and offered wholly different evidence  
23 about relevant markets than that offered in the case against Apple. The holdings in *Apple I* and  
24 *Apple II* about Epic’s proposed foremarket/aftermarkets for Apple products, and Epic’s deficient  
25 evidentiary support for those markets, have no preclusive effect here.

26 Consequently, Epic was perfectly free at trial to argue for Android-only relevant markets,  
27 just as Google was free to argue for a different result. Each side took maximum advantage of this  
28 freedom to hotly dispute the definition of the product markets for Epic’s antitrust claims. The jury

1 was presented with evidence sponsored by each side, including witness testimony, documents, and  
2 expert witness opinions, on the question of the relevant product markets. Google took every  
3 opportunity to tell the jury that Google and Apple compete, and so should be considered to be in  
4 the same relevant market. If there was one theme Google pressed relentlessly to the jury, it was  
5 this one. Epic presented substantial evidence showing that the Android-only product markets  
6 made factual and economic sense for this case. For example, Epic’s economics expert, Professor  
7 Douglas Bernheim, testified that the fact that Apple and Android compete in the market for  
8 smartphones does not mean that they are in the same market for app distribution. Trial Tr. at  
9 2423:23-2424:1. The jury also heard from Dr. Bernheim that, based on a SSNIP test and other  
10 widely accepted analytical tools, his conclusion was that the Apple App Store does not compete in  
11 the same relevant market as the Google Play Store. *Id.* at 2424:17-2427:16, 2462:2-16.

12 In the end, the jury did precisely what it was called upon to do by resolving the hotly  
13 disputed evidence to define the product markets as stated in the verdict. The possibility that the  
14 jury might have come out differently is no basis for judgment as a matter of law in Google’s favor.  
15 *See White*, 312 F.3d at 1010. Google also has not demonstrated that the product market verdicts  
16 were clearly contrary to the weight of the evidence.

17 **B. Aftermarket Theory**

18 Despite the plain record of what happened at trial, Google says that Epic was actually  
19 proposing a “‘single-brand aftermarket’ theory of market definition” that it failed to prove. Dkt.  
20 No. 925 at 5. This is a rather odd argument because Epic never presented or even mentioned a  
21 “single-brand aftermarket” in this case, and Google’s suggestion to the contrary is utterly bereft of  
22 any evidence.

23 To start, there was no “single brand” in play here. As the parties stipulated in the final jury  
24 instructions, Android is a mobile operating system; it is not a brand. *See* Dkt. No. 850 at ECF  
25 p. 16 (Instruction No. 12 (Stipulations of Fact)) ¶ 15. The undisputed evidence showed at trial that  
26 Android devices are manufactured by many companies, including Google, Samsung, Motorola,  
27 OnePlus, Xiaomi, and other OEMs. This is in sharp contrast to iOS devices, which are  
28 manufactured by Apple alone. *See Apple II*, 67 F.4th at 966. Epic expressly argued for a single-

1 brand aftermarket in the Apple case for iOS devices, and the circuit stated that, “in some instances  
2 one brand of a product can constitute a separate market.” *Id.* at 976 (cleaned up). That  
3 observation, and the discussion that followed it, are not relevant here because Epic never proposed  
4 or argued for a market consisting of only “one brand of a product” with respect to Google. *Id.*

5 Google says that it doesn’t matter that there are multiple brands of Android devices  
6 because “Google generates significant revenue from Android devices.” Dkt. No. 945 at 2. Even  
7 taking that as true for discussion purposes, it hardly explains why many different and competing  
8 OEM brands should be treated as a single brand. Google certainly did not present any evidence,  
9 or case law or other authority, in support of that proposition. There simply is no evidentiary or  
10 legal reason to treat Epic as though it had pursued a foremarket/aftermarket theory that it did not  
11 propose, or to penalize it for not proving that theory at trial.

12 This case also differs from the Apple case in that the Apple App Store is the only app store  
13 for iOS devices, which is not true for Android devices. Substantial evidence was presented at trial  
14 that multiple Android app stores can be, and on occasion have been, available to consumers.  
15 Google’s efforts to suppress rival app stores was another key theme at trial. To that end, an  
16 internal Google document asked the “existential question”: “How do we continue to keep Play as  
17 the preeminent distribution platform for Android?” Trial Tr. at 920:24-921:14. Other documents  
18 referred to a “market” consisting of Android app developers only, *see id.* at 922:13-923:18, and  
19 spoke of “store rivals” that were Android app stores. *Id.* at 952:3-13. Google’s CEO, Sundar  
20 Pichai, testified that each Android OEM “had the potential to have an app store” which “would  
21 compete with Google Play.” *Id.* at 1343:1-5.

22 Overall, the evidence at trial demonstrated that the markets for Android app distribution  
23 and in-app payment systems are different from the markets for Apple/iOS app distribution and in-  
24 app payment systems that were at issue in *Apple II*. Epic did not pursue a “single-brand  
25 aftermarket” here.

## 26 **II. JURY INSTRUCTIONS RE RULE OF REASON**

27 Google requests a new trial because of alleged legal errors in the jury instructions relating  
28 to the Rule of Reason. Dkt. No. 925 at 7-11. Its arguments are not well taken.



**A. Step One**

On Step 1 of the Rule of Reason, Google says the jury was impermissibly allowed to “conclude that individually lawful acts are unlawful in the aggregate.” Dkt. No. 925 at 10.

The record demonstrates otherwise. Before trial, the Court granted summary judgment for Google on “‘plaintiffs’ claims that Google unlawfully prohibits the distribution of other app stores on Google Play.” Dkt. No. 700 at 1 (quoting Dkt. No. 483 at 6). Because governing case law makes clear that Google had no duty to deal, the Court stated that plaintiffs could reference § 4.5 of the Developer Distribution Agreement by way of background and context only, but they could not “argue or suggest that § 4.5 is unlawful either on its own *or in combination with other alleged practices.*” *Id.* (emphasis added) (citing *Verizon Communications, Inc. v. Trinko*, 540 U.S. 398 (2004)).

The same guidance was stated in the jury instructions. The jury was instructed that “[i]t is not unlawful for Google to prohibit the distribution of other app stores through the Google Play Store, and you should not infer or conclude that doing so is unlawful in any way.” Dkt. No. 850 at ECF p. 33 (Instruction No. 24). For the anticompetitive conduct required for Epic’s Section 2 claim, the jury was instructed that, “[i]n determining whether Google’s conduct was anticompetitive or whether it was legitimate business conduct, you should determine whether *the conduct* is consistent with competition on the merits, whether *the conduct* provides benefits to consumers, and whether *the conduct* would make business sense apart from any effect it has on excluding competition or harming competitors.” *Id.* at ECF p. 30 (Instruction No. 23) (emphases added). Nothing in the instructions invited the jury to consider Google’s alleged conduct in the aggregate, or gave them permission to consider whether independently legitimate conduct may have combined to create an anticompetitive effect.

The verdict form underscored this by directing the jury to consider each type of conduct separately. For Epic’s Section 1 claim, the jury was called upon to answer separately for three types of agreements -- (1) DDA agreements; (2) agreements with Google’s alleged competitors or potential competitors under Project Hug or Games Velocity Program; and (3) agreements with

OEMs that sell mobile devices (including MADA and RSA agreements) -- whether each type of agreement was an “unreasonable restraint(s) of trade.” Dkt. No. 866 at 5 (Question No. 7).

As the record established, and contrary to Google’s argument, the jury was in fact “guided . . . to consider each category of conduct individually.” Dkt. No. 925 at 10.

**B. Step Two**

Google says that on Step 2 of the Rule of Reason analysis, “[t]he jury should have been instructed to consider cross-market justifications,” *i.e.*, procompetitive benefits not limited to the relevant product markets at issue. Dkt. No. 925 at 7-8. But in *Apple II*, our circuit expressly took up the issue of the “cognizability of cross-market rationales.” 67 F.4th at 989. There, Epic had argued that, “even if Apple’s security and privacy restrictions are procompetitive, they increase competition in a *different market* than the district court defined and in which Epic showed step-one anticompetitive effects, and thus are not legally cognizable at step two.” *Id.* (emphasis in original).

Our circuit noted that the “Supreme Court’s precedent on this issue is not clear,” even though on occasion it “has considered cross-market rationales in Rule of Reason and monopolization cases.” *Id.* The circuit “decline[d] to decide this issue here.” *Id.* The circuit also determined that Apple’s procompetitive justifications related to the relevant market. *Id.* at 990.

Consequently, there was no legal mandate to expressly require the jury to consider cross-market justifications, such as “Google’s competition with Apple in smartphones,” Dkt. No. 925 at 9, as Google urges. Contrary to Google’s argument, this is not at all a situation where the circuit has not yet “stated ‘explicitly’ a legal point that ‘was implicit in [its] past decisions.’” Dkt. No. 945 at 4 (citing *Dang v. Cross*, 422 F.3d 800, 807-08 (9th Cir. 2005)). It also bears repeating that Google spared no opportunity at trial to tell the jury of its views about competition with Apple.

**C. Step Three**

Google makes another argument contrary to circuit law for Step 3 of the Rule of Reason analysis by stating that the Court improperly invited the jury to balance competitive effects. Dkt. No. 925 at 11. But as Google acknowledges, *Apple II* expressly “held that Ninth Circuit precedent

requires balancing.” *Id.*; see *Apple II*, 67 F.4th at 994 (“where a plaintiff’s case comes up short at step three, the district court must proceed to step four and balance the restriction’s anticompetitive harms against its procompetitive benefits.”). There was no error in the Court’s balancing instruction to the jury.

### III. SUFFICIENCY OF EVIDENCE SUPPORTING JURY VERDICT

Google’s primary claim for judgment as a matter of law or a new trial is that the verdict is “unsupported by legally sufficient evidence.” Dkt. No. 925 at 11-27. True to form, Google objects to just about everything adduced at trial that impugned Google’s conduct. The Court has undertaken the laborious task of reviewing the record in light of Google’s many complaints, as the ensuing discussion details. Some prefatory observations are in order. The true crux of Google’s argument isn’t that the verdict was not based on substantial evidence, but rather that the jury didn’t see the evidence in the way Google wanted. This is not a situation where the verdict was based on speculation or where the evidence would allow only one conclusion that is contrary to what the jury decided.

Another problem is that Google ignores in practice the standards for granting JMOL or a new trial. For Rule 50, as discussed, all reasonable inferences are made in favor of the verdict and Epic, as the nonmoving party. See *Experience Hendrix*, 762 F.3d at 842, 845. This is so irrespective of whether the evidence might have supported a different result. See *Pavao*, 307 F.3d at 918 (“A jury’s verdict must be upheld if it is supported by substantial evidence, which is evidence adequate to support the jury’s conclusion, even if it is also possible to draw a contrary conclusion.”). Google subverts this by asking in effect that all inferences be drawn for its benefit. For Rule 59, where the review is free of inferences for either side, the jury verdict will stand unless it is “against the clear weight of the evidence.” *Silver Sage*, 251 F.3d at 819. Google slights this by insisting that a new trial is warranted simply because some evidence was disputed and the jury might have decided differently.

#### A. Relevant Market

##### 1. Limitation to Android In-App Payments

The jury found a market consisting of “Android in-app billing services for digital goods



and services transactions.” Dkt. No. 866 at 3, 6 (Question Nos. 2, 8). Google says that “[t]he evidence does not support the jury’s decision to exclude out-of-app payment systems from the relevant product market,” highlighting websites in particular as a “reasonable substitute” that should have been included in the relevant market. Dkt. No. 925 at 11-12.

Not so. Epic’s economics expert, Dr. Steven Tadelis, testified that the relevant product market was properly limited to “any product that could do what Google Play Billing does,” *i.e.*, “any payment solution provider for digital content on Androids.” Trial Tr. at 2553:1-4. He further testified that “web purchases are not a viable substitute for in-app purchases” because of “friction” -- whereas in-app purchases can be completed in two to three steps by the user, web store purchases required at least eight steps. *Id.* at 2554:4-2556:15. This increased friction was likely to lead to increased dropoff along the process, where users do not complete the purchase. *Id.* at 2556:19-2557:10. Google executive Purnima Kochikar was taken through the 18 steps a user would have had to go through “to have the Amazon App Store show up on the Home Page of their Android device.” *Id.* at 746:3-752:8. Kochikar called the sideloading experience “abysmal,” *id.* at 753:22-755:5, and agreed that “the number of steps makes for a bad user experience,” and “where there’s friction, people [often] fall out and don’t complete purchases.” *Id.* at 762:20-763:2. Witness Eric Chu testified that YouTube engineers worked to “reduce the number of clicks,” asking themselves, “[f]rom the moment the user wants to buy something[,] what can we do to reduce [the] number of clicks and make it easier for them to purchase something[?]” *Id.* at 1441:2-1442:11; Dkt. No. 915-1 at ECF p. 85. The “[r]eason for that is obvious that the more friction there is[,] the more likely we lose users along the buy flow.” *Id.*

The jury was instructed, without objection by Google, that “[i]n determining the product market, the basic idea is that the products within it are interchangeable as a practical matter from the buyer’s point of view.” Dkt. No. 850 at ECF p. 22 (Instruction No. 18). This means “they must be, as a matter of practical fact and the actual behavior of consumers (meaning users and developers), substantially or reasonably interchangeable to fill the same consumer needs or purposes. Two products are within a single market if one item could suit buyers’ needs substantially as well as the other.” *Id.* The jury reasonably relied on the testimony summarized

above, and similar evidence at trial, to conclude that from the developers’ and users’ points of view, out-of-app payment systems were not reasonable substitutes for in-app payment systems.

Google’s citation to *Tanaka v. University of Southern California*, 252 F.3d 1059, 1063 (9th Cir. 2001), is misdirected. Google cites it for the proposition that consumers’ personal preferences are not relevant. But *Tanaka* involved a highly unique personal preference -- literally the preference of just plaintiff Tanaka, a “star high school soccer player” who wanted to “remain in the Los Angeles area” so she could “be close to her family.” 252 F.3d at 1061, 1063. Tanaka challenged an intercollegiate athletic association rule that discouraged intra-conference transfers, and although the association was national in scope, she alleged that the “relevant geographic market is Los Angeles and the relevant product market is the ‘UCLA women’s soccer program,’” based purely on her personal desires. *Id.* at 1063. The circuit concluded that Tanaka’s personal preference to be near her family could not be a proper basis for defining the “‘area of effective competition’ for student-athletes competing for positions in women’s intercollegiate soccer programs.” *Id.*

The facts here could not be more different. This is not a case of one person trying to define a purely personal market. Substantial evidence was presented at trial to the effect that an out-of-app payment solution would not meet a developer’s or user’s needs as well as an in-app payment solution. The evidence showed that this was not a matter of mere preference or taste, but a product of design and function. Out-of-app payment solutions are a cumbersome mechanism for sales, and so are not likely to be viewed by developers or users as reasonable substitutes for in-app payment systems. The jury’s finding of an Android in-app payment solutions product market was not against the great weight of the evidence.

## 2. Geographic Scope

Substantial evidence supported the jury’s finding that the relevant geographic market was “worldwide excluding China.” Dkt. No. 866 at 3, 6 (Question Nos. 2, 8). The jury was instructed that the “relevant geographic market is the area in which Google faces competition from other firms that compete in the relevant product markets and to which customers can reasonably turn for purchases.” Dkt. No. 850 at ECF p. 23 (Instruction No. 19). The jury was further instructed that

“[w]hen analyzing the relevant geographic market, you should consider whether changes in prices or product quality in one geographic area have substantial effects on price or sales in another geographic area, which would tend to show that both areas are in the same relevant geographic market.” *Id.* Contrary to Google’s argument, there is no absolute “legal test” of “consumer substitution.” Dkt. No. 945 at 6.

Epic’s economics expert, Dr. Douglas Bernheim, testified that the appropriate geographic boundary for the relevant market was “global, excluding China.” Trial Tr. at 2445:16-24. This was because “competitive conditions” in different countries “are largely similar,” and Google’s challenged conduct in this case was “global, excluding China.” *Id.* at 2446:1-11. It was appropriate to carve out China because China was “very dissimilar” in that Google Android, Google Play, and Google’s challenged conduct, were “not in China.” *Id.* at 2446:18-23. Dr. Tadelis agreed with Dr. Bernheim’s analysis, and also concluded that the geographic market was “global excluding China.” *Id.* at 2560:10-16.

Other witnesses at trial also testified to these facts. For example, Google witness James Kolotouros testified that Google Play is not permitted in China and is not preinstalled on smartphones distributed there. *See id.* at 1070:7-17. On the flip side, “every Android smartphone outside of China comes preinstalled with Google Play.” *Id.* at 1070:18-21. Kolotouros also testified that Google faced competition from companies such as Samsung, Xiaomi, Oplus, and Vivo, which “had the potential to have app stores that competed with Google Play in markets outside of China.” *Id.* at 1079:16-1080:24; *see also id.* at 1207:13-1210:11 (Google witness Jamie Rosenberg’s testimony re internal Google document discussing Amazon App Store’s growing popularity in Japan, and Google’s concern that Amazon might “scal[e] up and go[] global,” becoming a more global threat to Google Play). Similarly, for in-app payment solutions, there was trial testimony that Google Play Billing is “not offered in China,” and Google faces competition from companies such as PayPal, Square, and Braintree outside of the United States. *Id.* at 2586:21-2588:25. The jury’s geographic market findings were supported by adequate evidence and were not against the great weight of the evidence.



**B. Anticompetitive Effect of Google’s Conduct**

For Epic’s monopolization claim, the jury was instructed that “[a]nticompetitive acts are acts, other than competition on the merits, that have the effect of preventing or excluding competition or frustrating the efforts of other companies to compete for customers within the relevant market.” Dkt. No. 850 at ECF p. 30 (Instruction No. 23). For Epic’s restraint of trade claim, the jury was instructed that “[a] harmful effect on competition, or competitive harm, refers to a reduction in competition that results in the loss of some of the benefits of competition, such as lower prices, increased output, or higher product quality.” *Id.* at ECF p. 37 (Instruction No. 28). The jury was further instructed to consider the following factors: “(1) the effect of the challenged restraint on prices, output, product quality, and service; (2) the purpose and nature of the challenged restraint; (3) the nature and structure of the relevant market; (4) the number of competitors in the relevant market and the level of competition among them, both before and after the challenged restraint was imposed; and (5) whether Google possesses market power.” *Id.*

After considering the evidence in light of these instructions, the jury found that Google “willfully acquired or maintained monopoly power by engaging in anticompetitive conduct.” Dkt. No. 866 at 3 (Question No. 3). The jury also found each of these agreements to have been unreasonable restraints of trade (and so impliedly to have had anticompetitive effects): (1) “DDA agreements”; (2) “Agreements with Google’s alleged competitors or potential competitors under Project Hug or Games Velocity Program”; and (3) “Agreements with OEMs that sell mobile devices (including MADA and RSA agreements).” *Id.* at 5 (Question No. 7).

Each of these findings was supported by substantial evidence, and was not against the great weight of the evidence. There was substantial evidence at trial that Google had engaged in conduct, “other than competition on the merits, that ha[d] the effect of preventing or excluding competition or frustrating the efforts of other companies to compete for customers within the relevant market.” Dkt. No. 850 at ECF p. 30 (Instruction No. 23). It bears mention that Google does not contest that Epic presented sufficient evidence on Google’s market power or the barriers to entry that existed in both of the relevant markets found by the jury. *See* Dkt. No. 932 at 15, n.11; *compare with* Dkt. No. 945.

The jury heard a great deal of testimony about Google’s agreements with existing or potential competitors in connection with Project Hug.<sup>3</sup> Activision Blizzard King (ABK) was a developer that signed a Project Hug deal. The developer of mobile games such as Candy Crush and Call of Duty, ABK “had the highest estimated spend by users of all of the Project Hug developers.” Trial Tr. at 445:5-13. ABK had been “quite vocal [in] complaining about Google Play’s 30 percent fee,” and Google witness Koh testified that it had been communicated to Google that ABK was considering the option of starting its own Android app store. *Id.* at 445:14-22, 463:5-8. Google estimated that it faced a risk of losing \$243 million per year if ABK were to pull its content from the Google Play Store. *Id.* at 463:24-464:9. Google internally discussed this risk, as well as the possible “contagion risk” if ABK were to launch its own store and “attract[] more content from other developers.” *Id.* at 463:5-464:24.<sup>4</sup> Google then offered ABK a Project Hug deal for \$360 million. *Id.* at 465:3-466:8. Google witness Kochikar testified about Google’s concern that ABK might launch its own Android app store, and Google’s hope that a Project Hug deal would prevent that. *See id.* at 804:7-807:12. Riot Games was another developer that was offered and took a Project Hug deal. An internal Google document stated, “A year ago, we pulled all the stops, promised them \$10 million co-marketing for before they signed GVP, for example, to get Riot Games to stop their in-house app store effort.” *Id.* at 811:6-812:12.

In exchange for significant payments from Google, developers who signed a Project Hug agreement “could not launch [an app] either first or exclusively on any competing Android distribution platform.” Trial Tr. at 442:23-443:2. Developers who agreed to Project Hug also could not “launch a materially different version of the game that it had on Google Play on a competing Android app distribution platform.” *Id.* at 444:10-15. Epic’s expert, Dr. Bernheim, testified to the anticompetitive effects of these provisions. In his view, these provisions

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<sup>3</sup> The Games Velocity Program was a continuation of Project Hug. *See* Trial Tr. at 491:13-14; *id.* at 410:13-15 (Google witness Lawrence Koh affirming that “Project Hug was later renamed the Games Velocity Program”).

<sup>4</sup> Witness Koh testified that the “contagion risk” had to do with Google’s concern that “once top developers took their gaming content off of Google Play, that other developers would potentially follow suit.” Trial Tr. at 422:14-16.



1 “prevent[ed] any significant differentiation,” disincentivized developers from creating valuable  
2 content, and would also have discouraged Project Hug developers from entering the app store  
3 market themselves. *Id.* at 2403:7-2410:7.

4 There was also substantial evidence of the anticompetitive effects of Google’s agreements  
5 with OEMs, specifically the Mobile Application Distribution Agreement (MADA) and Revenue  
6 Share Agreements (RSA). The MADA is an agreement that Google enters into with Android  
7 OEMs. Pursuant to the MADA, OEMs must place Google Play on the default home screen of  
8 their Android devices. Trial Tr. at 1351:14-21. Virtually all OEMs that manufacture Android  
9 smartphones have entered into a MADA, and so Google Play is preinstalled on the default home  
10 screen of nearly all Android smartphones. *Id.* at 1351:22-1352:8. Google’s CEO, Sundar Pichai,  
11 acknowledged that “[t]ypically,” placement on the default home screen tends to lead to more  
12 usage of an app. *Id.* at 1352:9-12. Preinstallation of Google Play on the default home screen is a  
13 precondition for an OEM to have access to other key Google GMS apps and Android APIs  
14 without which many Android applications cannot function. *Id.* at 1355:1-1356:4. Restrictions  
15 like these made it difficult for competitors like Amazon to obtain “premium placement” for apps  
16 such as its own app store, Dkt. No. 915-1 at ECF p. 107, and so it was difficult for alternative app  
17 stores to get off the ground.

18 The terms of the Google Revenue Share Agreements with OEMs were even more  
19 aggressive. The RSA 3.0 agreements are the third iteration of that contract, and they offer OEMs  
20 the opportunity to enroll their devices in three different tiers. Trial Tr. at 1053:1-9. For the  
21 “premier tier,” which offers the highest revenue share, an OEM “may not install any app store on  
22 their device other than Google Play.” *Id.* at 1053:7-24. Epic’s expert, Dr. Bernheim, testified that  
23 this kind of profit-sharing with a competitor disincentivizes competition, and so is anticompetitive.  
24 *Id.* at 3189:22-3190:14.

25 There was additional trial testimony to the same effect. Google witness Kolotouros  
26 testified that, with the exception of Samsung, most of Google’s major Android OEM partners  
27 executed RSA 3.0 agreements. *Id.* at 1092:4-6. OnePlus was one such OEM, and outside of  
28 China and India, OnePlus enrolled the vast majority of its devices in the premier tier. *Id.* at



1 1094:3-17. Although OnePlus wanted to enter into a partnership with Epic Games whereby the  
2 Epic Games Store app would be preloaded onto OnePlus devices, Google declined to grant a  
3 waiver to the premier tier restrictions. After that, OnePlus decided to “take Google’s revenue  
4 share payments and keep nearly all of its devices outside of India in the premier tier instead of  
5 preinstalling the Epic Game Store app.” *Id.* at 1094:18-25, 1098:24-1099:13.

6 The jury heard more evidence from which it could reasonably conclude that the RSA 3.0  
7 agreements were anticompetitive. This included an internal Google document in which Google  
8 employees discussed how “Google cannot stop OEMs from preloading the Amazon App Store due  
9 to anticompetitive concerns on the MADA 2.0 only,” but “[w]e can do this through revenue share  
10 deals.” Trial Tr. at 1074:8-17. The employees agreed that having “stricter placement restrictions  
11 through revenue share” was something that would “help stem the tide of emerging app stores.” *Id.*  
12 at 1074:22-1075:19. In the course of this discussion, another Google executive inquired about  
13 why Google “doesn’t put everything in the MADA” and asked, “Is it anticompetitive concerns or  
14 something more than that?” Witness Kolotouros responded, “This might be better discussed in  
15 person as opposed to writing.” *Id.* at 1075:20-1076:12. This and much other evidence supported a  
16 verdict against Google on the “purpose and nature of the challenged restraint,” namely the RSA  
17 3.0 agreements.

18 There was additional evidence at trial that Google worked to suppress competition by  
19 actively impeding users from “sideloading” competing app stores through increased “friction” and  
20 “scare screens.” “Sideloading” referred to a direct installation process whereby a user “find[s] an  
21 app via a mechanism that is not billing itself purely as an app store.” Trial Tr. at 2128:4-6.  
22 “Friction” meant “the screens, the dialogues, the warnings that an operating system is going to put  
23 up and show to users and sort of force the user to click through or interact with before the user can  
24 actually accomplish the intended task.” *Id.* at 2113:21-25. Google’s CEO, Sundar Pichai,  
25 acknowledged that “the more friction there is, the less likely the user completes that flow,” *id.* at  
26 1361:11-13, and there was evidence that Google viewed friction as a means of impeding users  
27 from sideloading third-party app stores. For example, a Google internal document titled,  
28 “Amazon competitor deep dive,” noted that “Amazon [was] emerging as a major challenge to Play

in gaming globally.” Dkt. No. 886-50 (Trial Ex. 682) at ECF pp. 1-2. Another slide was titled, “Amazon strongly promoting its 15%+ discount on IAPs available via Play, but for now switching hurdle too high for most users.” *Id.* at ECF p. 11. Under the heading, “Significant hurdle to switching to Amazon apk,” the Google document stated, “Process is quite complex, involves 14 steps (but motivated users will follow walkthroughs like this on YT).” *Id.*

For the DDA agreements, Google says that “Epic failed to prove, and no reasonable jury could have found, that the anti-steering restrictions in the DDA were anticompetitive because they merely prevent developers who choose to use valuable Google services and intellectual property in the Play store from depriving Google of compensation for that value.” Dkt. No. 925 at 22. But this objection ignores the trial evidence about the anticompetitive nature of these anti-steering restrictions and the DDA in general. For example, there was testimony that Paddle, a company that offers to developers in-app payment solutions, was prevented from more effectively entering the in-app payment services market because “Google Play’s terms of services for developers [*i.e.*, the DDA] expressly prohibit the usage of a third-party payment method.” Trial Tr. at 653:3-11.

This and similar trial evidence demonstrate that the jury’s findings on Google’s anticompetitive conduct were well supported. There was sufficient evidence for the jury to agree with Dr. Bernheim that Google “impairs competition without preventing it entirely,” Trial Tr. at 3181:1-3185:12, thereby satisfying the requirement that Google’s conduct “frustrat[ed] the efforts of other companies to compete for customers within the relevant market.” Dkt. No. 850 at ECF p. 30 (Instruction No. 23). Because the evidence discussed above is adequate to support the jury’s verdict, the Court declines to address Google’s other arguments on the anticompetitive effect element of Epic’s antitrust claims.

### C. Tying

Substantial evidence supported the jury’s finding in favor of Epic on its tying claim, namely that “Google unlawfully tied the use of the Google Play Store to the use of Google Play Billing.” Dkt. No. 866 at 7 (Question No. 10).

The jury heard evidence that the Google Play Store and Google Play Billing are separate products. It was not necessary for Epic to prove that there was separate demand for Google Play



Billing as a standalone product; rather, it was enough for Epic to prove that there was demand for in-app billing services separate from the demand for app distribution services. *See Jefferson Parish Hospital District No. 2 v. Hyde*, 466 U.S. 2, 21-22 (1984) (a “tying arrangement cannot exist unless two separate product markets have been linked”; “in this case no tying arrangement can exist unless there is a sufficient demand for the purchase of anesthesiological services separate from hospital services”). Epic presented substantial evidence on this element. Epic witness Steven Allison testified, for example, that in the case of the Epic Game Store, developers can use Epic Direct Pay, which is Epic’s in-app payment solution, or “they can bring their own if they’ve set their game up to do so.” Trial Tr. at 227:5-12. Down Dog’s CEO, Benjamin Simon, testified that he would prefer Stripe or PayPal over Google Play Billing, and if he “had the ability at Down Dog to use PayPal or Stripe on [Down Dog’s] Android app,” he would do so. *Id.* at 303:2-10.

There was substantial evidence that Google coerced its customer -- here, developers -- to buy the tied product (Google Play Billing) in order to obtain the tying product (Google Play Store). Numerous witnesses testified that developers whose apps are on the Google Play Store are required through the DDA to use only Google Play Billing to sell any digital content that is to be used inside of the app. *See, e.g.*, Trial Tr. at 887:7-13, 889:9-21, 1185:18-21.

The jury had an ample evidentiary basis for rejecting Google’s business justification defense as pretextual, and finding that Epic had successfully proven the existence of less restrictive alternatives. The trial testimony established, for example, that developers who sold digital content for use outside of the app were exempted from the requirement to use Google Play Billing, which weakened Google’s business justification argument. *See* Trial Tr. at 1185:22-25. Similarly, developers who sold physical goods were also exempted. *See* Dkt. No. 886-94 (Trial Ex. 1436); *see also* Trial Tr. at 936:3-9.

Epic also adduced evidence that the Google Play Store was so profitable that Google did not need to tax developers a 30% fee through Google Play Billing to be fully compensated for its IP and other costs for the Google Play Store. For example, the jury saw an internal Google document showing that some developers paid “more than a hundred million dollars per year more than the value that they have obtained from Google”; and for the 100 most negative developers



(whose payments to Google exceeded the estimated value they received from Google), Google internally estimated that on average, they “receiv[ed] a value equivalent to 19 percent,” but “still were required to pay Google a 30 percent revenue share.” Trial Tr. at 608:6-611:22. Based on Google Play’s revenue numbers, this worked out to \$1.43 billion per year that the top 100 most negative developers were overpaying to Google. *See id.* at 612:3-613:11. There was additional evidence at trial that Google was concerned about public criticism calling out “Google’s 30 percent fee on in-app purchases made on apps distributed through Google Play” as “highway robbery.” *Id.* at 417:17-418:24; *see also, e.g., id.* at 708:18-21 (internal Google document stating that “the team estimates that if you compare the value of nonSearch-driven discovery versus revenue share paid, Tinder is now deriving only 10 percent of the revenue share value versus the 30 percent share they pay.”). Overall, the jury had more than enough evidence at the balancing step to conclude that any benefit from Google’s tie was outweighed by its competitive harms.

It was not improper for the jury to consider the DDA as an unreasonable restraint of trade and to additionally consider Epic’s tying claim. The tying claim focused on Google’s coercive tie of Google Play Billing to the Google Play Store, while Epic’s challenge to the DDA also encompassed the DDA’s anti-steering provisions. Multiple legal claims may be based on the same underlying conduct, and Google has not presented any authority to the contrary.

#### **D. Substantially Less Restrictive Alternatives**

Google challenges the jury’s implicit finding in favor of Epic on Step 3 of the Rule of Reason, and says that no reasonable jury could find that Epic satisfied its burden to identify substantially less restrictive alternatives that would be virtually as effective in serving Google’s objectives without significantly increased cost. Dkt. No. 925 at 24-27.

Google overlooks the fact that the jury might simply have rejected Google’s proffered justifications. The jury had ample evidence to do so. There was evidence at trial, for example, to support Epic’s theory that the exclusionary provisions in the MADA and RSA agreements were put into those agreements for anti-competitive reasons, rather than any legitimate business reasons. *See, e.g.,* Trial Tr. at 2920:19-2921:7 (Google witness Gennai testifying that RSA 3.0 premier tier was developed “to respond to increasing app store competition from OEMs and large platforms

like Epic”); *id.* at 1078:3-1079:19 (changes to RSA proposed “to protect Google from key strategic risks,” including risks of revenue loss due to “Chinese OEMs and Samsung . . . actively investing in creating own app and services ecosystems”); *id.* at 1073:6-1076:12 (internal Google document stating that “Google cannot stop OEMs from preloading the Amazon App Store due to anticompetitive concerns on the MADA 2.0 only,” but could “prevent OEMs from preloading competitive app stores” through “revenue share deals”).

For the sideloading warnings, there was evidence at trial that the increased friction built in by Google were not related to Google’s assessment of the security risk posed by the material the user was trying to sideload. Google CEO Pichai agreed that “[s]ome websites, such as those from reputable developers, actually present very low security risks,” and yet “Google’s unknown sources flow does not distinguish between those trusted developers and every other website.” Trial Tr. at 1365:2-8; *see also id.* at 1693:11-1695:21 (sideloading / “unknown source” install flows of 14 or 17 steps applied equally to apps from companies such as Microsoft or Adobe, which are known to Google). Epic’s mobile security expert, Dr. James Mickens, testified that any legitimate benefit of increased security protections for users could have been accomplished through less restrictive means such as fewer screens, or a notarization process that differentiated among the types of security risks presented by different apps or companies. *See id.* at 2149:2-7, 2151:6-8, 2152:4-6, 2157:2-24. His overall opinion, which the jury could reasonably have credited and believed, was that the friction Google imposes is unwarranted and disproportionate, and that Google could reduce the amount of friction while preserving the status quo on security.

For the parity provisions in Project Hug and the anti-steering provisions in the DDA, as discussed above in Section III.B. *supra*, sufficient trial evidence supported a conclusion by the jury that those were motivated by anticompetitive reasons, rather than legitimate business ones.

#### **IV. EVIDENTIARY RULINGS AND ADVERSE INFERENCE INSTRUCTION**

Google says that three evidentiary rulings entitle it to a new trial. Dkt. No. 925 at 27-29. The record demonstrates otherwise.

##### **A. Google Employees’ Use of Attorney-Client Privilege**

To start, Google says the Court “permitted Epic to question witnesses about markings



related to attorney-client privilege on produced documents.” Dkt. No. 925 at 27. Google also claims, quite brazenly and wrongly in light of its willful conduct to hide material evidence, that it had not “improperly withheld any document on the basis of privilege” and so “Epic’s questioning of Google witnesses regarding privilege markings on documents gave the jury the incorrect impression that Google had improperly asserted the attorney-client privilege.” *Id.*

Google’s remarks are ill made. After the Court’s findings of fact against Google for willfully failing to preserve Google Chat evidence, *see* Dkt. No. 469, more evidence emerged at trial of a frankly astonishing abuse of the attorney-client privilege designation to suppress discovery. CEO Pichai testified that there were occasions when he “marked e-mails privileged, not because [he was] seeking legal advice but just to indicate that they were confidential,” as he put it. Trial Tr. at 1321:17-24. He knew this was a misuse of the privilege. *Id.* at 1323:5-17. Emily Garber, a Google in-house attorney, testified that there was a practice at Google of “loop[ing] in” a lawyer based on a “misapprehension about the rules of privilege,” and that Google employees “believed that including [an in-house lawyer] would make it more likely that the email would be considered privileged.” *Id.* at 964:21-966:5. Garber called this “fake privilege,” a practice that she appears to have found amusing rather than something a lawyer should have put an immediate and full stop to. *Id.* at 964:21-23; Dkt. No. 887-86 (Trial Ex. 6487) at EXHIBIT pp. 012-013.

On this record, there was no error in the Court’s evidentiary ruling that Epic could “present fake privilege” and make arguments to the jury about it. *Id.* at 785:5-6. The Court was crystal clear that Epic could not “do anything else with privilege,” and it commended the parties for not saying “anything about” documents that had been “branded privileged” even though it should not have been subject to an assertion of privilege. *Id.* at 785:8-12.

#### **B. Preclusion of Outcome of *Epic v. Apple***

Google repackages the prior preclusion argument as an ostensible evidentiary objection to say: “the Google Play store’s primary competitor is free to use the same basic service fee model explains why it is important for Google to use that same model. The Court erred by preventing Google from introducing evidence that Apple was unlikely to change its existing model in light of



1 the outcome of *Epic v. Apple* -- a market fact that supports Google’s procompetitive justifications  
2 for that model and the alleged tie.” Dkt. No. 925 at 28.

3 The point fares no better as an evidentiary objection than it did in the prior version. *See*  
4 Section I.A., *supra*. In addition, for the same reason that there was no error in the jury’s decision  
5 to exclude Apple from the relevant product markets it found, these outside facts about Apple are  
6 not nearly as relevant and important as Google urges.

7 **C. Adverse Inference Instruction**

8 Google’s comments on the permissive inference instruction are even more poorly taken  
9 that those about the attorney-client privilege. The Court determined after an evidentiary hearing  
10 held before trial that Google had willfully failed to preserve relevant Google Chat  
11 communications, and allowed employees at all levels to hide material evidence. Dkt. No. 469.  
12 The evidence presented at trial added more fuel to this fire. As discussed, Google in-house  
13 attorney Garber testified about the company practice of asserting a fake privilege to shield  
14 documents and communications from discovery. Other witnesses also amplified the seriousness  
15 and pervasiveness of Google’s preservation abuses. For example, Google employee Margaret  
16 Lam, who worked on RSA issues, said in a Chat message that she didn’t have a specific document  
17 because “competition legal might not want us to have a doc like that at all :).” Trial Tr. at 991:16-  
18 992:8 (smiley face emoji in original). She was a party to other Chats where, in a discussion about  
19 MADA, she asked to turn history off because of “legal sensitivity”; she requested to turn history  
20 off in a different conversation about RSAs, so there would be no “trail of us talking about waivers,  
21 etc.” Dkt. No. 887-83 (Trial Ex. 6464), Dkt. No. 888-23 (Trial Ex. 8020). Witness Lam also  
22 testified that the decision of which Chats to preserve had been left in her hands, but she had “no  
23 idea” what was or was not relevant. Trial Tr. at 1012:6-1014:9.

24 Overall, there was an abundance of pretrial and trial evidence demonstrating “an ingrained  
25 systemic culture of suppression of relevant evidence within Google.” *Id.* at 1044:15-17. The  
26 Court had advised the parties before trial that an appropriate sanction might include a permissive  
27 inference instruction to the jury. Dkt. No. 700 at 3-4. After the additional evidence of  
28 malfeasance emerged during trial, the Court raised the question of whether a mandatory adverse

inference instruction would be more fitting. Trial Tr. at 1044:4-22. Even then, despite the mountain of evidence against Google, the Court held an evidentiary hearing on the question outside of the presence of the jury.

The results of this hearing were disappointing. Google’s chief legal officer, Kent Walker, was the main witness. Despite the seriousness of these issues, and the likelihood that they could affect other litigation matters where Google is a party, Walker showed little awareness of the problems and had not investigated them in any way. Trial Tr. at 1834:18-1835:17. Much of his testimony was in direct opposition to the facts established at the prior Google Chat hearing. *See, e.g., id.* at 1829:16-1830:3. Overall, Walker did nothing to assuage the Court’s concerns.

In these circumstances, the salient question was not whether an adverse inference instruction should be given at all, but whether the inference should be permissive or mandatory. The Court would have been well within its discretion to order a mandatory inference, given the volume of evidence of Google’s misconduct. Even so, the Court took the conservative approach of permitting the jury to make an adverse inference rather than requiring it to. The parties had a fair and balanced opportunity during trial to present evidence and arguments about Google Chat preservation and Google’s conduct, and both sides took full advantage of that. The jury was free to make or decline an inference as it saw fit. To further ensure fairness, the Court instructed Epic that it could not make arguments about Google’s conduct predating August 2020. *See* Trial Tr. at 3237:4-8. If Epic opened that door, Google would have been permitted to respond, *see id.*, but Epic followed that instruction in its closing argument. *See id.* at 3352:3-3386:14, 3430:19-3435:7.

In light of this record, Google’s complaints about the inference instruction are wholly misdirected. It has not provided anything close to a good reason to conclude otherwise.

## V. ADVISORY JURY

Google says, rather disingenuously, that the Court has not clarified “whether it was going to treat the jury’s verdict as binding or advisory,” and requests that the Court treat the verdict as advisory. Dkt. No. 925 at 29. It argues further that it “did not consent to a jury trial,” and even if it did, it withdrew that consent. *Id.* at 29-30.

1 Google again ignores that it already made these arguments to the Court prior to the start of  
2 trial, and lost, for good reason. The Court expressly denied Google’s request to “abandon a jury  
3 trial” on the eve of trial. Trial Tr. at 6:13-7:16. Google is in effect seeking reconsideration of that  
4 ruling, for no good reason.

5 To summarize the prior proceedings on this issue, under Federal Rule of Civil Procedure  
6 39(c)(2), “[i]n an action not triable of right by a jury, the court, on motion or on its own: . . .  
7 (2) may, with the parties’ consent, try any issue by a jury whose verdict has the same effect as if a  
8 jury trial had been a matter of right, unless the action is against the United States and a federal  
9 statute provides for a nonjury trial.” Google consented to a jury trial of Epic’s antitrust claims  
10 against it. A party’s consent under Rule 39(c)(2) can be express or implied. *See, e.g., Bereda v.*  
11 *Pickering Creek Indus. Park, Inc.*, 865 F.2d 49, 52 (3d Cir. 1989); *Thompson v. Parkes*, 963 F.2d  
12 885, 889 (6th Cir. 1992) (en banc); *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 795-96  
13 (9th Cir. 1999); *Broadnax v. City of New Haven*, 415 F.3d 265, 271-72 (2d Cir. 2005); *Pals v.*  
14 *Schepel Buick & GMC Truck, Inc.*, 220 F.3d 495, 501 (7th Cir. 2000).

15 Google gave unambiguous express and implied consent to a jury trial. The express consent  
16 can be found in documents such as the parties’ Joint Submission re Trial Proposal, which stated,  
17 for “Issues Triable to a Jury”: “The parties agree that all claims by all Plaintiffs are triable to a  
18 jury, with the exception of the claims brought under California’s Unfair Competition Law, . . . ,  
19 and claims that the States have brought under the laws of 38 states other than California.” Dkt.  
20 No. 505 at 3. The record also shows that the Court and the parties contemplated a jury trial for  
21 Epic’s antitrust claims for years, without objection by Google and with its active participation in  
22 the filing and discussion of jury instructions, proposed voir dire, and motions in limine.

23 Google’s filing on November 1, 2023, one day before jury selection and two court days  
24 before the start of trial, was the first time it said it was “withdraw[ing] that consent.” *See* Dkt. No.  
25 730 at 7. That was far too late. *See Bereda*, 865 F.2d at 55 (“Rule 39(c) does not permit the  
26 district court to withdraw its prior consent to the litigants’ request for a nonadvisory jury.”);  
27 *Thompson*, 963 F.2d at 889 (“Even if the court was correct that no jury trial right existed in this  
28 case, F.R.Civ.Pro. 39(c) permits both sides to stipulate to a jury trial. To be sure, a district court



1 does not have to go along with the stipulation, but once that occurs, it does not have unbridled  
2 discretion to change its mind.”); *see also AMF Tuboscope, Inc. v. Cunningham*, 352 F.2d 150, 155  
3 (10th Cir. 1965) (where parties had stipulated to a jury trial that was set to begin on March 1,  
4 abuse of discretion for district court to vacate the jury trial on February 28 and re-set the case for a  
5 bench trial, based on court’s conclusion that the parties were not entitled to a jury trial as of right).

6 Allowing Google to withdraw its consent two court days before trial would have caused  
7 immense prejudice to Epic, which had been awaiting its day before a factfinder since filing its case  
8 years prior, and which had spent many months preparing for a jury trial. A jury trial was proper,  
9 and the jury’s verdict is properly treated as binding.

### 10 CONCLUSION

11 Google’s motion did not present good grounds for judgment as a matter of law or for a new  
12 trial.

13 **IT IS SO ORDERED.**

14 Dated: July 3, 2024

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JAMES DONATO  
United States District Judge

## **EXHIBIT P**

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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**  
**SAN FRANCISCO DIVISION**

**IN RE GOOGLE PLAY STORE  
ANTITRUST LITIGATION**

Case No. 3:21-md-02981-JD

THIS DOCUMENT RELATES TO:

*Epic Games, Inc. v. Google LLC et al.*,  
Case No. 3:20-cv-05671-JD

**EPIC'S RESPONSE TO GOOGLE'S  
PROFFER REGARDING EPIC'S  
PROPOSED INJUNCTION**



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On December 11, 2023, a jury found that Google unlawfully engaged in anticompetitive conduct in both the Android app distribution market and the market for Android in-app billing services for digital goods and services transactions. (Dkt. 866.) At every step since that verdict was handed down, Google has sought to chip away at the jury’s findings. After first seeking to vacate the jury’s verdict, *see* Dkt. 925, Google next filed over 90 pages of unsolicited objections attacking every aspect of Epic’s proposed injunction (the “Proposed Injunction”), including the very premise of imposing any injunction at all. (*See* Dkt. 958 at 2 (objecting to the Proposed Injunction as, *inter alia*, “unnecessary” given the States’ Settlement).) During the May 23, 2024 proceeding, this Court advised Google that, despite its objections, “[t]here is going to be a remedy. . . . [a]nd if it causes a period of two years or four years or six years of adjustment, . . . that’s the consequence of having violated the antitrust laws.” (May 23, 2024 Hearing Tr. 64:23-65:1.)

Google nevertheless asked for permission to submit a proffer and the Court permitted Google to address “the tech work required and economic costs, if any” of three of Epic’s proposed remedies: (i) third-party app store access to the Play Store’s catalog; (ii) “library porting”, *i.e.*, transferring the update ownership of users’ apps from the Play Store to third-party app stores; and (iii) distribution of third-party app stores on the Play Store. (Dkt. 978 at 1; Dkt. 981, Google’s Proffer Regarding Epic’s Proposed Injunction (“Proffer”), at 1.) Importantly, in Google’s Proffer, ***Google does not say that the proposed remedies are infeasible.*** Instead, Google’s Proffer is yet another attempt to weaken the remedy for its unlawful conduct. Google adds unnecessary hurdles and proposes implementation methods that would make the injunction substantially less effective. Google materially inflates the costs of compliance and then suggests that those inflated costs should excuse it from having to right its past wrongs. However, as this Court has made clear, “Google, as an illegal monopolist, will have to pay some penalties” and “bear some costs”. (May 23, 2024 Hearing Tr. 38:12-17.)

*First*, Google’s proposed implementation of catalog access through a metadata export to third-party stores, while acceptable in concept, introduces a series of unnecessary steps and omits critical parts of the catalog. Google seeks to render the remedy ineffective by limiting

1 the content of the data that will be shared with app stores and how frequently that data will be  
2 updated, imposing inappropriate eligibility requirements for participating app stores, potentially  
3 introducing unnecessary complications to obtain user consent that could discourage users from  
4 downloading apps available via catalog access, and assessing a fee for catalog access. Google's  
5 cost estimates for implementing this remedy are wildly inflated and its timeline is unreasonable.

6 *Second*, Google attempts to avoid implementing a library porting remedy by  
7 arguing that new features of Android 14 are sufficient to achieve the Proposed Injunction's  
8 goals. However, as Google recognizes, Android 14 lacks key functionality required by the  
9 library porting remedy. And as its Proffer makes clear, implementing that additional  
10 functionality would be a straightforward extension of Android 14's current capabilities, which  
11 even Google estimates would cost no more than \$■ million. While this figure is inflated,  
12 Google's Proffer confirms that library porting is a cost-effective and achievable remedy.

13 *Third*, Google argues that distributing third-party app stores on the Play Store will  
14 require a "fundamental redesign" of the Play Store. That is not so. Google can easily distribute  
15 third-party app stores on the Play Store *today*; the only current obstacle is Google's own rule  
16 against it. In its Proffer, Google resists the simple solution of changing the rule and insists on a  
17 variety of new measures, including most notably that Google must review every app appearing in  
18 the catalog of a third-party app store to assess compliance with *Google's* content policies, as if  
19 those apps were being submitted directly to the Play Store. But they are not. There is no  
20 technical need for this new layer of review; it is a commercial choice by Google and a serious  
21 impediment to the effectiveness of this remedy. This unnecessary and inappropriate layer of  
22 review is also the single largest cost, by far, that Google claims it will incur in complying with  
23 the Proposed Injunction. Distributing third-party app stores requires little more than hosting  
24 those stores' APKs in the Play Store and making them available for download.

25 Google's objective is clear: create unnecessary complications and costs to portray  
26 the proposed remedies as unduly burdensome, while also watering down their effectiveness, so  
27 as to keep the relevant markets as close to the monopolistic status quo as possible.  
28



**I. APPROACH TO GOOGLE’S PROFFER**

This Court permitted Google to make a proffer describing “the tech work required and economic costs, if any”, for providing catalog access, library porting and distribution of third-party app stores. (Dkt. 978 at 1.) Instead of limiting itself to the subject at hand, Google frequently attempts to reargue the merits of the remedies. (*See, e.g.*, Proffer at 1-2 (attacking the remedies as a harm to consumers); *id.* at 8-9 (arguing that the catalog access remedy would upend Google’s relationship with app developers); *id.* at 13 (asserting that library porting is unnecessary).) As the Court has noted, however, the parties are “not writing on a clean slate”; the “facts and the evidence behind the jury’s verdict are now carved in stone”; and the parties have already provided detailed submissions on the merits of the proposed remedies such that it is “doubt[ful] there’s more that [Google] can say”. (May 23, 2024 Hearing Tr. 4:20-24, 137:17-18.) Accordingly, Epic does not respond here to Google’s merits arguments.

Google’s Proffer sets forth at a high level how it intends to implement the requested remedies and then estimates the costs, timing and feasibility of its proposed implementations. In response, Epic explains (a) where Google proposes implementations that would unduly limit the effectiveness of the remedy, (b) where Google proposes implementations that are needlessly complex and costly, and (c) the costs and timeline of a reasonable and effective implementation of the remedies.

**II. CATALOG ACCESS**

The Proposed Injunction requires Google to “provide Third-Party App Stores access to the Google Play store app catalog” for a period of six years. (Dkt. 952, Proposed Injunction, at 7.) The purpose of this remedy is to “mitigate[] the network externalities that insulate Google’s illicitly acquired market power” and to “jump-start[] the competitive process by decoupling the user side of the market from the developer side. In effect, it provides rival app stores with immediate scale on the developer side, allowing them to compete for users on the merits without confronting a chicken-and-egg problem.” (Dkt. 952-1, Statement of B. Douglas Bernheim (“Bernheim Stat.”), ¶ 63.)

Google does not dispute that it is technically feasible to provide third-party stores



with access to the Play Store’s catalog of apps. (See Proffer at 3-4; Ex. 2 to Zaken Declaration, Excerpts of Deposition Transcript of Vitor Baccetti (“Baccetti Tr.”) 93:2-12.) Google proposes to implement catalog access by exporting certain metadata from the Play Store to servers accessible by third-party stores, which Epic agrees is a reasonable solution in principle (among other possible reasonable solutions). However, Google’s proposal severely undercuts the effectiveness of this approach, elevating Google’s own commercial interests above the interests of opening up competition. Specifically, Google’s proposal (1) requires developers to opt in to having their apps listed on third-party stores, (2) requires stores to meet ill-defined “eligibility criteria”, (3) places unreasonable limitations on the catalog data that is exported, (4) potentially introduces complications to obtain user consent that could discourage users from downloading apps available via catalog access, (5) limits the frequency of catalog database export, and (6) imposes unjustified fees. Epic addresses each of these deficiencies in turn.

Google estimates that implementation of catalog access on its terms will cost approximately \$ [REDACTED] million and take 12-16 months to implement. As discussed below, Google’s cost estimates and timeline are inflated and unsupported.

**A. Google’s Proposed Implementation of Catalog Access Is Flawed**

1. Google’s Proposal that Developers Opt-In to Catalog Access Will Materially Diminish the Effectiveness of the Remedy

Google seeks to substantially limit the effectiveness of catalog access by allowing it only for those apps whose developers affirmatively opt-in. Specifically, Google proposes giving developers a mechanism to opt-in to catalog access in the Google Play Console. Developers would be provided with individual check boxes to “identify the authorized third-party app stores that would have access to the app metadata”. (Proffer at 8; Dkt. 981-1, Declaration of V. Baccetti ISO Google’s Proffer Regarding Epic’s Proposed Remedies, (“Baccetti Decl.”) ¶ 19.) This approach would drastically undermine the catalog access remedy by depriving third-party app stores of the benefit of the full scale of the Play Store.

The goal of catalog access is to overcome the indirect network effects that make it challenging for new stores to gain traction: users are less likely to go to the store if there are few apps, and developers are less likely to list their apps if there are few users. Giving rival stores

1 access to the Play Store catalog helps address this chicken-and-egg problem by making available  
2 the wide range of apps that users seek, which Google alone has been able to amass through its  
3 misconduct. For this remedy to be truly effective, third-party app stores need a comparable  
4 selection and scale of apps as the Play Store. But if developers are required to opt in to catalog  
5 access, that is exceedingly unlikely to happen because many developers will fail to take the  
6 necessary steps to opt-in—not because they oppose it, but for reasons such as inadvertence,  
7 unawareness, inattentiveness or error. As Dr. Bernheim explained:

8           There’s a literature on opt-in and opt-out in behavioral economics,  
9           and what it shows is that there tend to be very strong default  
10          effects. . . So if you establish the default to be opt-out so that  
          people have to opt in, you’re going to have a much smaller fraction  
          of developers who end up opting in.

11 (May 23, 2024 Hearing Tr. 46:11-47:1 (Bernheim)); *see also* May 23, 2024 Hearing Tr. 47:2-8  
12 (The Court: “[S]o as an economic principle . . . Opting in is going to be much less effective in  
13 dealing with network effects than opting out.” Dr. Bernheim: “That’s correct.”).

14           An opt-in mechanism is all but guaranteed to gut the catalog access remedy—and  
15 Google never disputes that point or even seems to consider it. Nothing in Google’s Proffer  
16 addresses the ineffectiveness of an opt-in regime to achieve the goal of the injunction, and there  
17 is no evidence that Google’s [REDACTED]

18 [REDACTED].  
19           Google’s insistence on an opt-in regime is not based on feasibility or cost,<sup>1</sup> but on  
20 a pretextual concern that “implementing catalog sharing on an opt-out basis would violate  
21 developers’ intellectual property rights” and effectively enjoin non-party developers. (Proffer  
22 at 9-10 (citing *Comedy Club, Inc. v. Improv W. Assocs.*, 553 F.3d 1277, 1287 (9th Cir. 2009)).)  
23 However, Google wrongly equates an opt-out regime with no choice at all. Under an opt-out  
24 regime, developers can still choose not to participate in catalog access. (May 23, 2024 Hearing  
25 Tr. 54:4-9, 54: 17-20.) *Comedy Club* is not to the contrary. In that case, the injunction under  
26 review sought to prevent non-parties from taking certain actions. *See* 553 F.3d at 1282-83.

27  
28 <sup>1</sup> Mr. Baccetti [REDACTED]

[REDACTED] (Baccetti Tr. 236:4-9)

1 Here, the Proposed Injunction does not require non-party developers to do anything—they are  
2 not parties to the injunction, they are not bound by the injunction, and they can decide to opt-out  
3 of catalog access at any time.

4 Google also complains that it “would have no technical way to prevent a third-  
5 party app store from continuing to use the metadata already in its possession” if the developer  
6 opted out after catalog access was first granted. (Proffer at 9.) This argument does not withstand  
7 scrutiny. Google can prohibit this behavior in its terms of service. (Baccetti Tr. 249:16-250:22  
8 (“[REDACTED].”).) And in the  
9 hypothetical situation where a third-party app store violates those terms, Google can still refuse  
10 to install apps improperly listed by a third-party app store. (Baccetti Tr. 252:18-253:1  
11 (“[REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED].”); Declaration of James Mickens (“Mickens Decl.”)  
15 ¶¶ 27-31.) That would solve the problem. Third-party app stores are unlikely to continue listing  
16 apps that are not available to be installed, which would be a terrible user experience that would  
17 hurt the app store.

18 2. Imposing Eligibility Criteria on Stores Participating in Catalog Access  
19 Would Limit the Effectiveness of the Remedy

20 Google insists that it “would need to develop eligibility criteria for third-party app  
21 stores to mitigate the risk that catalog access would legitimize app stores that distribute malware,  
22 violate the intellectual property of developers . . . , or otherwise promote illegal activity or  
23 objectionable content”. (Proffer at 11.) Google should not be able to act as a gatekeeper,  
24 determining which of its rivals can take advantage of the catalog access remedy. Google states  
25 that these eligibility criteria would include whether a store has “(1) a minimum number of apps  
26 in its own catalog and the basic infrastructure in place to conduct app store business; (2) bans on  
27 malware, pirated apps, and other illegal content; (3) procedures in place to enforce those bans;  
28 and (4) reasonably sufficient safeguards to protect the metadata” as well as agreement to terms of



1 service to ensure compliance with local laws and regulations. (*Id.* at 12.) Moreover, Google  
2 states that it would “need to develop and implement an ongoing audit . . . to ensure third-party  
3 app stores enrolled in catalog access continue to meet those criteria”. (*Id.* at 11.) Imposing such  
4 criteria on third-party app stores would give Google a veto right over its competitors and would  
5 undermine the effectiveness of this remedy. For example, allowing Google to impose a  
6 requirement of a minimum number of apps that a store must already have in its catalog to qualify  
7 as an app store re-creates the chicken-and-egg problem that catalog access is designed to address.  
8 (Bernheim Stat. ¶ 63.)

9           The thrust of Google’s argument is that catalog access could give Google’s  
10 “imprimatur” to stores trafficking in malware or illegal content and damage the Play Store brand.  
11 (Proffer at 11.) That is not so. Apps installed by the Play Store through catalog access could be  
12 clearly branded as such, enabling users to distinguish between Play Store apps and apps sourced  
13 from the third-party store. To the extent some users might not appreciate the difference, the  
14 theoretical potential for an impact on the Play Store brand would be a small price to pay for  
15 restoring competition. Having violated the antitrust laws, Google cannot insist on watering  
16 down the remedy to protect its brand from speculative harms.

17           Google also claims, without support, that users will be harmed because they are  
18 “more likely to download malware that is intermingled with Google’s catalog”. (*Id.*) That is  
19 pure supposition (Mickens Decl. ¶¶ 24-26), which again ignores the fact that apps installed by  
20 the Play Store could be branded accordingly, while apps installed by the third-party store will not  
21 have Google branding. That argument also ignores the other protections against malware  
22 present on Android devices, such as Google Play Protect (“GPP”), which will continue to protect  
23 users. (*See* Section IV.B.)

24           Google’s separate contention that catalog access will harm developers by  
25 allowing legitimate versions of their apps to sit alongside pirated versions is unfounded. Google  
26 has made no showing that developers will be harmed by having their apps available, along with  
27 the millions of other apps in the Play Store catalog, on a store that also has some pirated  
28 software. And developers that are concerned about a particular store can opt out. Stores that do

1 a poor job weeding out bad apps will gain that reputation with users and developers alike, and  
2 they will fail. It is time for Google to allow the market to work.

3           3.       Google Seeks To Improperly Limit the Metadata To be Shared

4           Google’s restrictions on the metadata it proposes to share would severely limit the  
5 effectiveness of the catalog access remedy. Google does not precisely define the types of catalog  
6 data that would be provided but states that it “could” include “basic data pertaining to the app”  
7 and “basic information provided by the developer about the app”. (Baccetti Decl. ¶ 8.) That is  
8 far too narrow to be useful. As a baseline principle, Google should be required to provide the  
9 same data that appears in the Play Store’s own catalog. (May 23, 2024 Hearing Tr. 7:5-8 (The  
10 Court: “What we are doing is leveling the playing field, lifting the barriers, and making sure that  
11 anybody who chooses to compete with Google in these two markets found by the jury has a free  
12 and unfettered opportunity to do so.”).)

13           Rather than state precisely what data it will provide as part of catalog access,  
14 Google explains what data it will omit, including “reviews of the app given by other users” and  
15 “data generated by Google, like auto-translations, age ratings and install counts”. (Baccetti Decl.  
16 ¶ 8.) There is no technical or security reason for withholding this data. (Declaration of Michael  
17 D. Ernst (“Ernst Decl.”) ¶ 34.) ***Google does not claim otherwise.*** In fact, Google already  
18 provides comparable information in other Google offerings like its Google Maps Places API,  
19 which makes user reviews and ratings available to developers that incorporate Google Maps  
20 data. (*Id.*) The information at issue is publicly available—not just to Play Store users, but to  
21 users of any browser running on any OS. *See* <https://play.google.com/store/apps?device=phone>.

22           Instead of a technical justification, Google argues that user reviews and “  
23 [REDACTED]  
24 (See, e.g., Baccetti Tr. 109:13-24 (“[REDACTED]  
25 [REDACTED]  
26 [REDACTED].”)). But Google was *able* to gather user reviews and other  
27 such information because it had maintained a large user base through anticompetitive conduct.  
28 The purpose of catalog access is to mitigate the advantage that Google has maintained, by

providing rival stores with competitive tools that Google’s unlawful conduct denied them.

[REDACTED]. (*Id.* 112-113.) The same is true for information like install counts, which stores use to provide more useful search results. Withholding such key information would degrade the quality of third-party stores and undermine the purpose of the remedy, solely to maintain an edge for the Play Store.

4. Google’s Proposed User Interface Could Introduce Unnecessary Friction

Google proposes that for downloads of apps that are available in a third-party store via catalog access, the “interface would contain Play branding, so that the user is on notice that they are downloading an app from the Play Store (rather than the third-party store) and that they are signed into a Play Store account and are agreeing to the Play [Store’s] terms and conditions, just as if they were installing the app directly from the Play store itself”. (Proffer at 5.) Google further proposes that a user interface from the Play Store will appear with “additional information about the app” that contains another “install button” that the user needs to click to install the app “without leaving the third party store”. (Baccetti Decl. ¶14.)

There is no security reason to have two screens (one generated by the third-party app store and one generated by Google) rather than one screen requesting user consent to install an app. In order to prevent the addition of unnecessary friction, the third-party app store could call an API that requests the display of Google’s interface once a user selects an app from their search results, thereby avoiding the need for two screens. (Mickens Decl. ¶ 32-33.) Any such user interface should be restricted to neutral language to ensure that users are not discouraged from downloading apps made available through catalog access.

5. Google Should Refresh the Catalog at Least as Often as It Is Updated for the Play Store

Google proposes to “regularly export [catalog data]” and “refresh it on a daily basis.” (*See* Baccetti Decl. ¶ 8.) Daily refreshing is insufficient to put third-party app stores on the same footing as the Play Store [REDACTED]. (Baccetti Tr. 96:23-97:14.) To ensure that other stores have the same apps and offerings as the Play Store, Google should be required to export the metadata as often as the corresponding data is updated for the Play Store.



Google does not contend that a more frequent export is infeasible, nor could it, as [REDACTED]. (Baccetti Decl. at 8-9 (“Mechanism for More Frequent Updates”); Baccetti Tr. 95:14-98:23.) Instead, Google contends that creating a mechanism for more frequent than daily updates would require 6-9 months of work from nine software engineers and one technical program manager. (Baccetti Decl. at 8-9; Baccetti Tr. 94:13-22.) Google provides no basis for this extraordinary claim, and there is none. Epic addresses these wildly inflated estimates below. (*See* Section II.B.)

6. Google Should Not Be Able To Impose Fees for Catalog Access

Google proposes to “charg[e] third-party app stores for the services provided by Google through catalog access.” (Proffer at 10.) That is inappropriate. The purpose of catalog access is to allow competing stores to overcome the network effects that help perpetuate the dominant position that Google maintained through anticompetitive conduct, not to create a new revenue stream for Google. Google should not further profit by requiring its rivals to pay for access to the breadth of apps that Google unlawfully denied them. Even without charging other stores for catalog access, Google will still profit from it. Play Store apps that are listed on third-party stores through catalog access will be treated as Play Store-distributed apps for all other purposes, including Google’s ability to collect fees from in-app purchases.

**B. Google’s Cost and Resourcing Estimates Are Inflated**

Google asserts that catalog access would be “extremely challenging and costly” and that “implementing it would cost approximately \$[REDACTED] million to \$[REDACTED] million” with “[REDACTED]” (Proffer at 7; *see also* Baccetti Decl. ¶¶ 32-35; Dkt. 981-4, Declaration of Christian Cramer ISO Google’s Proffer Regarding Epic’s Proposed Remedies (“Cramer Decl.”) ¶ 12.) Google estimates it would take “12-16 months to implement this remedy”. (Baccetti Decl. ¶ 36).

Google’s time estimate is exaggerated and unworkable. For this remedy to be successful, it must be implemented in short order. Third-party app stores are already at a competitive disadvantage, and undue delay will only further undermine their ability to compete

1 in the marketplace. As explained by Epic’s expert, Dr. Michael Ernst—a computer science  
2 professor and software engineering expert—12-16 months is far too high of an estimate for  
3 implementation from a technical perspective, as Google can reuse or adapt the metadata server  
4 used to populate the web version of the Play Store and reuse components of the Alley Oop  
5 process. (Ernst Decl. ¶¶ 48-49; Baccetti Tr. 208:10-210:20.)

6 Furthermore, Google’s cost estimates are inflated. *First*, Mr. Baccetti developed  
7 these cost estimates and timeline predictions based on the assumption that Google would  
8 implement the catalog access remedy in the exact manner described by Google in its Proffer and  
9 in Mr. Baccetti’s declaration. (See Baccetti ¶ 33.) As explained above, Google’s suggested  
10 approach includes several unnecessary steps, all of which pile on unnecessary costs and time.

11 *Second*, Google’s Proffer and supporting declarations estimate significant costs  
12 that are speculative. Mr. Baccetti testified that [REDACTED]  
13 [REDACTED]  
14 [REDACTED]. (Baccetti Tr. 5:21-6:8.) Moreover, Mr. Baccetti acknowledges  
15 that he did not “have a prior model on which to base these [resource and timeline] estimates, so  
16 there is some uncertainty about the specific resource requirements”. (Baccetti Decl. ¶ 33.) And  
17 Mr. Cramer, who purportedly performed the actual cost calculations, had no basis for them.  
18 Mr. Cramer testified [REDACTED]. (Ex. 4 to Zaken Declaration,  
19 Excerpts of Deposition Transcript of Christian Cramer (“Cramer Tr.”) 16:13-17:16.) He also  
20 testified that [REDACTED]

21 [REDACTED]  
22 [REDACTED].<sup>2</sup> (Cramer Tr. 22:1-25:14, 55:3-  
23 19.) In fact, while his declaration states that he reviewed Mr. Baccetti’s declaration prior to  
24 making his calculations (Cramer Decl. ¶ 11), Mr. Cramer testified [REDACTED]  
25 [REDACTED] (Cramer Tr. 30:16-18, 31:1-6).

26  
27 <sup>2</sup> Mr. Cramer testified that [REDACTED]  
28 [REDACTED]. The cost information was based on Google’s [REDACTED]  
[REDACTED]. (Cramer Tr. 25:20-28:7.) He did not verify [REDACTED]

[REDACTED]. (*Id.* at 66:1-69:12, 74:10-75:16, 77:17-78:23.)

1           *Third*, Google has arbitrarily padded its estimates with 20%-30% buffers in both  
2 time and cost. The only explanation Google provides for this buffer is Mr. Baccetti's "[REDACTED]  
3 [REDACTED]  
4 [REDACTED]". (Baccetti Tr. 302:8-18.) Google does not provide any evidence or analysis to  
5 account for this buffer beyond an assertion that it is customary do so on the Play Store team.  
6 (See Baccetti Decl. ¶ 35; Cramer Decl. ¶ 11; Cramer Tr. 52:11-53:2 ("[REDACTED]  
7 [REDACTED]  
8 [REDACTED].").) Despite applying the buffer, [REDACTED]  
9 [REDACTED]. (Cramer. Tr. 53:3-24.)

10           Dr. Ernst estimates that using practical plans, Google could implement catalog  
11 access in 2-3 months at a cost of less than \$781k. (Ernst Decl. ¶¶ 59-60.)

### 12   **III. LIBRARY PORTING**

13           The Proposed Injunction would require Google to "allow Users to provide Third-  
14 Party App Stores with access to a list of apps installed by the Play Store on the User's GMS  
15 Device. Google shall provide Users with the ability, subject to a one-time User permission, to  
16 change the ownership for any or all of those apps such that the Third-Party App Store becomes  
17 the update owner for those apps when those apps are directly distributed by the Third-Party App  
18 Store." (Proposed Injunction at 7.) Google's Proffer confirms that it can implement Epic's  
19 library porting remedy at a cost of less than \$[REDACTED] million. Google's primary objections to Epic's  
20 proposed remedy are (a) that its current Android 14 design is close enough to Epic's proposed  
21 remedy that it need not undertake any additional efforts, and (b) that library porting *could* harm  
22 consumers *if* app stores are able to claim the ownership rights to apps they cannot in fact update.  
23 Neither objection has merit. The current design of Android 14 would not achieve the goals of  
24 Epic's proposed remedy and is insufficient to cure the effects of Google's anticompetitive  
25 conduct. Further, the hypothetical harms to users raised in Google's Proffer will not materialize  
26 if the remedy is implemented as Epic intended, which Google confirms is technically feasible.  
27 Finally, implementing library porting in the manner that Epic proposes would not result in an  
28 increase to the cost estimate Google has put forward.



**A. Android 14’s Capabilities Do Not Adequately Address Harm to Competition**

Google argues that Epic’s proposed library porting remedy is unnecessary because, in its view, the current version of the Android operating system, Android 14, “largely achieve[s] the goal of library porting”. (Proffer at 14.) This is a merits argument, on which Google already had the opportunity to be heard and which is not responsive to the questions the Court ordered to be addressed in the Proffer. Regardless, that challenge is without merit.

The feature of Android 14 on which Google relies is called “update ownership”, which allows the app store that originally installs an app to “own” the delivery of future updates and prevents competing app stores from delivering updates. (Proffer at 13-14.) Google points out that, on an app-by-app basis, competing stores can request that a user “clear” the update ownership from an app so that the competing store can deliver updates. (*Id.* at 14.) When a user consents to this, update ownership does not transfer from one app store to another, but is instead cleared entirely such that *any* app store on the user’s phone can update the app. (*Id.*)

Google concedes that Android 14 lacks two features that would be required by the Proposed Injunction, which are necessary for the remedy to be effective. *First*, Android 14 requires “update ownership” changes to be made on an app-by-app, as opposed to a “bulk”, basis. That means users seeking to switch updates away from the Play Store to a competing store would need to give consent dozens of times in order to move all of their apps. That would unduly limit switching and preserve the Play Store’s current advantage. While Google argues that this process would not be “particularly burdensome *on the app store*” (Proffer at 14 (emphasis added)), its Proffer ignores the burden and hassle of subjecting *users* to a barrage of consent screens—a point Google’s witness conceded in deposition. (*See* Ex. 3 to Zaken Declaration, Excerpts of Deposition Transcript of Edward Cunningham (“Cunningham Tr.”) 173:12-174:10 (“[REDACTED] [REDACTED].”).)

Therefore, in addition to app-by-app changes, the Proposed Injunction requires that users be able to transfer the “update ownership” of all apps available on a given store with a single consent.

*Second*, Android 14 does not allow users to transfer ownership—it only allows

1 users to “clear ownership” such that all app stores can update an individual app. (Proffer at 14.)  
2 This creates a situation where multiple app stores compete to update the same app, a  
3 phenomenon known as “clobbering”, which can result in poor user experience and the loss of  
4 user data. (*Id.* at 13.) Google’s introduction of “update ownership” in Android 14 was  
5 purportedly intended to minimize clobbering, but it nonetheless allows an app to be clobbered  
6 after a user agrees to “clear ownership”. (*Id.*) Google’s proposal to continue to allow clobbering  
7 would disincentivize users from moving ownership of updates away from the Play Store and to  
8 third-party stores. And Google’s proposed use of the “clear ownership” function would allow  
9 the Play Store to continue delivering updates, even when the user would prefer to have updates  
10 delivered only by a competing store. To facilitate switching and to allow other stores to build  
11 relationships with users, the Proposed Injunction requires that users be able to *transfer* the  
12 responsibility of updating apps to a store of the user’s choice, to the exclusion of all other stores.

13 **B. Google Can Implement Library Porting with Minimal Further Updates**

14 Google’s Proffer confirms that it can, with relative ease, implement both features  
15 of the library porting remedy in the Proposed Injunction. Google’s objections to the wisdom of  
16 doing so—and the complications Google proposes to introduce—are without merit.

17 **1. Google Can Implement Multi-App Ownership Transfer**

18 Google does not argue that it would face technical challenges in designing an API  
19 for multi-app transfer of update ownership. (*See, e.g.*, Proffer at 15-16.) That is because Epic’s  
20 proposal is simply an extension of Google’s current “update ownership” APIs. Google already  
21 allows app stores to request update permission on an app-by-app basis, and implementing multi-  
22 app ownership transfer would primarily involve “introducing a new Android API to request a  
23 bulk ownership change, with a correspondent ‘behind-the-scenes’ permission that app stores  
24 would declare in their app manifest and that governs the use of this API.”<sup>3</sup> (Proffer at 15.)  
25

26 <sup>3</sup> Google’s proposed implementation also includes a mechanism that would require developers  
27 to consent to have their app’s update ownership permissions transferred through a multi-app  
28 transfer. (Cunningham Decl. ¶ 20.) Requiring developers to “opt in” to multi-app transfer would  
be redundant and unnecessary, given that library porting requires developers to have already  
entered into a relationship with, and made their apps available on, select third-party stores.  
Google offers no justification for this proposed additional consent.



Implementing the multi-app ownership transfer will be simple as it only requires repetition of the already-designed app-by-app transfer. (Ernst Decl. ¶ 87.)

Without denying the feasibility of this implementation, Google argues that it would “harm users”. (Proffer at 15.) But Google’s examples of “harm” do not withstand scrutiny. For example, Google argues that “users may have good reasons to prefer to have different apps updated by different app stores.” (*Id.*) Even if true, the Proposed Injunction does not require multi-app ownership transfer to the exclusion of app-by-app transfer. (*See* Ernst Decl. ¶ 76.) Both can be available to users, with multi-app transfer functioning as a convenience to users who, for example, “trust the policies of a particular store more than another”. (Dkt. 981-3, Declaration of E. Cunningham ISO Google’s Proffer Regarding Epic’s Proposed Remedies, (“Cunningham Decl.”) ¶ 18; Cunningham Tr. 188:11-18.) Google next argues that app-by-app transfer is “consistent with the way users already make decisions about installation of apps” and that multi-app transfer “is likely to confuse the user . . . [who] may not realize that the consequences of agreeing to that request will be to lose protection against having *any* app store update *any* app on the device.” (Proffer at 16.) Google cites no data to support its assertions regarding how users currently understand “update ownership” and the level of confusion that multi-app ownership transfer would introduce, [REDACTED].<sup>4</sup> (*See* Proffer at 15; Cunningham Decl. ¶ 18; Cunningham Tr. 135:14-136:2.)

2. Google Can Integrate “Transfer Ownership” Rather Than “Clear Ownership” Permissions

Google does not argue that it would face technical challenges in designing an API to “transfer ownership” of app updates. (*See* Proffer at 16-17; Cunningham Decl. ¶ 30.) Google instead claims that implementing “transfer ownership” would harm users; but these claims too are unfounded. Google’s primary objection is the possibility that “an app store could ask the user to ‘transfer ownership’ of an app that the app store does not actually distribute”, leaving the

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<sup>4</sup> Google asserts that “a host of additional problems” would arise were it to interpret the Proposed Injunction to require “that an app store can issue a single request for permission to automatically update all apps acquired from any source in the future.” (Cunningham Decl. ¶ 22.) But the Proposed Injunction mandates multi-app ownership transfer of the apps installed on a user’s device, not a future-facing transfer of apps which a user subsequently chooses to install.



1 app orphaned and unable to be updated. (Proffer at 17.) But Google elsewhere acknowledges  
2 the simple fix to this purported problem: allow developers to specify which app stores are  
3 authorized to accept “update ownership” permissions. The developer will know which app  
4 stores it is supplying with its APK. Accordingly, “[a] developer could embed a statement inside  
5 the APK file indicating . . . whether particular app stores are authorized to change ownership of  
6 the app.”<sup>5</sup> (*Id.* at 18.) In other words, update ownership would not be transferred to a third-party  
7 app store unless the developer has indicated that the store can deliver the updates. (Ernst Decl.  
8 ¶¶ 69, 78.) Moreover, as Google indicates, when a user consents to transfer ownership of an app,  
9 Android can delay “[t]he actual change in update ownership for each app . . . until the app store  
10 successfully installs an update for each app.” (Proffer at 15.) While Google’s statement that  
11 “[t]he Android operating system has no way to tell whether an app store actually distributes any  
12 particular app” is true (*id.* at 17), Mr. Cunningham acknowledged that the Android operating  
13 system [REDACTED]  
14 [REDACTED] (Cunningham Tr. 203:8-21). This action can be used as a trigger to switch over the  
15 ownership for that app. (Ernst Decl. ¶ 78.) As a result, the user will not risk “inadvertently  
16 shutting off updates”. (Cunningham Decl. ¶ 29.)

### 17 3. Google Can Display a Neutral Screen for User Consent

18 The Proposed Injunction calls for Google to allow users to transfer ownership of  
19 apps from the Play Store to a third-party app store “subject to a one-time User permission”.  
20 (Proposed Injunction § II.D.1.ii.) Currently, when a store requests permission to update an app  
21 in Android 14, the user is presented with a dialog warning that, “By updating from a different  
22 source, you may receive future updates from any source on your phone. App functionality may  
23 change.” (Cunningham Decl. ¶ 12.) To comply with the Proposed Injunction, Google “would  
24 create a new update ownership dialog”, given that some of the language in Google’s current  
25

26 <sup>5</sup> Google’s proposed opt-in consent for developers to have update ownership transferred rather  
27 than just cleared is unnecessary. Google “[REDACTED]” to include an opt-in  
28 mechanism for developers in Android 14. (Cunningham Tr. 105:16-106:4.) Given the  
protections that this design contemplates to prevent an app from being orphaned, there is no  
reason for a developer to care about whether ownership can be transferred versus cleared. This  
is especially true because those permissions can only be transferred to stores that carry the  
developer’s app; developers should have no problem if ownership is transferred to those stores.

1 dialog would be inapplicable. (*Id.* ¶ 30.) Google has not “[REDACTED]”  
2 the new dialog it proposes to display to users (Cunningham Tr. 219:25-220:9), and Epic  
3 accordingly is unable to respond to Google’s proposal. The permission dialog should contain  
4 neutral language that does not add artificial friction similar to that which Google has used to  
5 discourage direct download of apps from third-party app stores. (Bernheim Stat. ¶ 53.)

### 6 **C. The Costs to Google of Implementing Library Porting Are Trivial**

7 Mr. Cramer estimates that the library porting remedy will cost Google between  
8 \$[REDACTED] million and \$[REDACTED] million. (*See* Cramer Decl. ¶ 13.) Mr. Cramer testified that he was not  
9 involved in determining the resources necessary to carry out library porting and that he generally  
10 followed the same uninformed process as he did for his estimates in catalog access. (Cramer Tr.  
11 39:8-40:3.) None of Epic’s proposed modifications, which generally serve to streamline the  
12 remedy, would make this implementation any more costly to Google.

13 In fact, Google’s already low estimates appear inflated. For example, despite the  
14 fact that library porting will build on Android 14’s existing infrastructure, Google estimates that  
15 [REDACTED]  
16 [REDACTED]. (Cunningham Tr. 94:6-19 (emphasis added).) Further, Google insists  
17 that these changes must be integrated into an on-cycle update of the Android operating system  
18 and that they would take at least one-year to implement. (Cunningham Decl. ¶ 46.) As  
19 explained by Dr. Ernst, changes necessary to implement library porting affect top layers of the  
20 Android OS and are thus simpler to execute. (Ernst Decl. ¶ 81.) Dr. Ernst estimates that Google  
21 can execute the components necessary to implement library porting (ownership data fields, UI  
22 checkboxes for ownership transfer, transfer ownership permission API and bulk transfer) in one  
23 month at a cost of less than \$320k. (Ernst Decl. ¶ 90.)

### 24 **IV. DISTRIBUTION OF THIRD-PARTY STORES**

25 Epic’s proposed remedy requires Google to “allow distribution of competing  
26 Third-Party App Stores on the Google Play Store”. (Proposed Injunction § II.D.2.) Google does  
27 not dispute that it is simple as a technical matter to list third-party app stores in the Play Store  
28 today without making any changes to Android. As Google acknowledges, because app stores are



1 just apps, the Play Store can easily distribute them just as it distributes any other kind of apps.  
2 Rather than dispute the technical feasibility of the remedy, Google adds unnecessary changes  
3 that would diminish its effectiveness, and then complains about the cost of those unnecessary  
4 changes. The Court should not allow Google to obstruct the remedy, and it should not consider  
5 the costs Google would incur in engaging in obstruction as a reason not to proceed.

6 **A. Carrying Third-Party Stores Would Require Trivial Changes**

7 Google argues in its Proffer that distributing app stores on the Play Store would  
8 “require a fundamental redesign” of the Play Store. (Proffer at 20.) This is false. The VP of  
9 Engineering for Security and Privacy for Android confirmed that Google could list third-party  
10 stores on the Play Store today. (Ex. 1 to Zaken Declaration, Excerpts of Deposition Transcript of  
11 David Kleidermacher (“Kleidermacher Tr.”) 40:14-44:25; *see also* Ernst Decl. ¶ [●].) What  
12 Google calls a “fundamental redesign” is in reality two trivial changes to allow developers to  
13 identify their app as an app store and to allow users to find app stores.

14 *First*, as Mr. Baccetti conceded, creating a way for a developer to identify its app  
15 as an app store would be a “[REDACTED].” (Baccetti Tr.  
16 323:20-324:3.) Google can then leverage existing flows to direct the developer to sign relevant  
17 terms of service or other agreements. (Ernst Decl. ¶ 97.) Google already has terms of service  
18 that govern apps that can install other apps, which would require minimal updates to account for  
19 the distribution of third-party app stores. (*Id.*) These updates would be straightforward  
20 extensions of the Google Play Console’s current design and capabilities.

21 *Second*, Google contends that it would need to create a way “to handle the display  
22 of app stores within the store” (Proffer at 20), but that too is extremely simple. Currently, the  
23 Play Store contains 49 app categories, such as “games”, “dating” and “dining”. (Ernst Decl.  
24 ¶ 96.) Google can easily create an additional category for app stores. (*Id.*) No more is needed.

25 Separately, Google proposes to add a new warning screen “that advises users  
26 when they are about to download an app store.” (Proffer at 20.) This added friction is neither  
27 necessary nor appropriate. Users who have just made the affirmative decision to download an  
28 app labeled as an app store do not need to be presented with a screen notifying them that they are



Google’s Proffer states that if it had to make third-party app stores available on the Play Store, it *likely* would conduct “initial and ongoing review of all apps and updates in the app store’s catalog for compliance with Play’s security and content policies.” (Proffer at 20.) Google states that it “would subject the catalogs of those third-party app stores to the same rigorous review” that Google applies to the apps in the Play Store’s catalog. (*Id.* at 21.) This would include vetting all apps in the third-party store’s catalog for compliance with all Google policies. (Proffer at 21; Kleidermacher Tr. 134:25-135:20.) Any update to any app on the third-party store would be subject to the same review. (Proffer at 21.) This burdensome vetting of apps in third-party app stores would allow Google to retain its position as gatekeeper of Android app distribution, will thwart competition, and is contrary to the remedy’s intent to “pry open to competition a market that has been closed by defendants’ illegal restraints”. *Ford Motor Co. v. United States*, 405 U.S. 562, 577-578 (1972). This vetting should not be permitted.<sup>6</sup>

*Second*, giving Google the ability to reject apps from being carried on third-party stores would undermine competition. If Google has control over which apps are listed in its competitors' stores, the opportunities for abuse are endless. Giving Google this review power

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1 would allow it to interfere with competitors’ strategies by withholding or delaying approval of  
2 apps and updates. Even if Google applied its review criteria neutrally and faithfully, this would  
3 prevent competing stores from differentiating themselves by carrying apps that Google would  
4 not carry. Additionally, to perform this review, Google would need access to the catalogs of its  
5 competitors—including new and unreleased titles. Google thus would know which of its  
6 competitors were carrying which titles. Google should not be allowed to convert a remedy for its  
7 anticompetitive conduct into another means of gaining an anticompetitive advantage.

8 *Third*, Google’s principal justification for reviewing its competitors’ apps, namely  
9 that “the reputation for safety, security, and content moderation that the Play store has spent over  
10 a decade and billions of dollars building would be irreparably damaged” if the Play Store  
11 distributed third-party stores that contain apps that violate its guidelines, is unsupported. (Proffer  
12 at 21.) Google does not cite any authority that protecting a monopolist’s brand is a relevant  
13 consideration in remedying its anticompetitive conduct. Further, Google’s claim is premised on  
14 the idea that a user who downloads an app containing “harmful” content from a third-party store,  
15 which was itself downloaded from the Play Store, will associate that content with the Play Store,  
16 rather than with the store from which it was downloaded. Google offers no evidence to support  
17 this view, [REDACTED]

18 [REDACTED].

19 (Kleidermacher Tr. 92:12-19.) But Mr. Kleidermacher’s “strong opinion” cannot outweigh the  
20 contrary evidence and the various means Google has to address this purported harm. The Play  
21 Store currently hosts apps that contain user-generated content that violates Google’s content  
22 guidelines, such as Reddit, Instagram and BitTorrent. Google does not vet the content of these  
23 apps and has offered no evidence that it is blamed for “harmful” content available on those apps.  
24 Apps downloaded from a third-party store would be one level further removed from Google. In  
25 addition, Google can try to *compete* on the basis that apps on the Play Store are safer. If true, the  
26 market will reward Google for doing a better job than others in vetting its catalog.

27 *Fourth*, Google’s treatment of other app stores currently on Android confirms that  
28 the review of apps on third-party stores is premised on purported brand damage, not security

concerns. Google [REDACTED]  
[REDACTED], similar to the review it performs for all Play Store apps, even though  
apps on those stores could pose the exact same risks to users. (*See id.* at 72:24-73:7.) Instead,  
[REDACTED], which scans all apps for malware at the time  
of install, regardless of the source of the install. (*Id.* at 54:11-55:7; Mickens Decl. ¶ 56.) GPP  
can continue to do that work for apps downloaded from third-party stores on the Play Store.  
(Dkt. 981-5, Declaration of D. Kleidermacher ISO Google’s Proffer Regarding Epic’s Proposed  
Remedies, (“Kleidermacher Decl.”) ¶ 24; Kleidermacher Tr. 215:12-19.)

**C. Google Should Not Impose Eligibility Criteria on App Stores**

In addition to reviewing the apps on third-party stores, Google’s Proffer indicates  
that it may impose eligibility criteria on the third-party stores themselves. This too is merely a  
recommendation that lacks any executive input or sign off. Google has not decided [REDACTED]  
[REDACTED]. (Kleidermacher Tr. 66:10-67:3; Baccetti  
Tr. 350:19-351:14.) Epic’s ability to respond to this nebulous recommendation is limited, but as  
noted above, Epic rejects any effort by Google to homogenize the content of third-party app  
stores by imposing its own content guidelines on all stores distributed through the Play Store.

Google argues that some criteria to define an app store are required to prevent fee  
evasion, but Google declines to offer such a definition. (Proffer at 22; Kleidermacher Decl. ¶ 6.)  
Google’s Developer Distribution Agreement (“DDA”) already has a definition of an app store:  
“any Product that has a purpose that facilitates the distribution of software applications and  
games for use on Android devices outside of Google Play.” (Ex. 5 to Zaken Declaration, DDA  
at 5.) Mr. Kleidermacher testified that [REDACTED]

[REDACTED].<sup>7</sup>  
(Kleidermacher Tr. 124:4-125:8.) Epic’s expert considers an app store to be “an application that  
enables the user to install other apps”, consistent with Google’s DDA. (Ernst Decl. ¶ 24.)

<sup>7</sup> Mr. Kleidermacher also [REDACTED]

[REDACTED] (Kleidermacher Tr. 120:17-121:3.)



**D. Google Should Create Parity by Adding Screens to the Play Store**

The Proposed Injunction requires that the download process for apps on third-party app stores be the same as the download process for apps on the Play Store, except that Google may present the user with a “single one-tap screen” asking the user to allow the third-party app store to install other apps. (Proposed Injunction §§ II.B.1.i, II.B.2.i.) To effectuate this remedy, Google proposes an unduly complicated change to the Android operating system, which would put more control in Google’s hands, to address a security risk of Google’s own making. There is a simpler and more effective way to achieve parity in the download process between the Play Store and third-party stores, as described below.

As currently configured, the Play Store has what is called an `INSTALL_PACKAGES` permission, which allows the Play Store to install apps on a user’s device without having Android verify user consent. That allows the Play Store to install apps immediately after a user clicks an “Install” button, or even to install apps silently without user consent. One possible way to give third-party app stores parity would be to allow them to have the `INSTALL_PACKAGES` permission. However, this would enable third-party app stores to install apps on a user’s device even if the user did not give consent, which is a powerful capability that third-party app stores do not need to compete effectively.

Accordingly, Android currently has a separate permission, called `REQUEST_INSTALL_PACKAGES`, which applies to app stores downloaded by a user. (Cunningham Decl. ¶ 57.) When an app store with the `REQUEST_INSTALL_PACKAGES` permission tries to install an app, Android generates a confirmation dialog asking the user “Do you want to install this app?”. This dialog serves a valid security purpose, but because it does not appear when users download apps through the Play Store (which has the `INSTALL_PACKAGES` permission and thus does not trigger an Android-generated prompt), there is a lack of parity that gives the Play Store a competitive advantage.

Google proposes to make revisions to the Android operating system to create a third type of permission that would remove the Android-generated confirmation dialog that `REQUEST_INSTALL_PACKAGES` presents before an app is installed. The precise contours of

1 this new permission are not clear from Google’s submission, but it appears that Google is  
2 contemplating something that, without other measures being taken, would enable the app store  
3 “to install additional apps without any consent by or even notification to the user”. (Cunningham  
4 Decl. ¶ 62.) Having created this problem, Google then proposes two separate measures to  
5 “mitigate” it. *First*, the permission would be granted “by the installer of the app store”, meaning  
6 that for app stores distributed on the Play Store, it would be the *Play Store* that controls the  
7 granting of the permission. (Cunningham Decl. ¶ 63.) In other words, the Play Store would be  
8 the gatekeeper to the permission for all third-party app stores distributed by it. (*Id.*) *Second*,  
9 Google proposes to engineer a solution in Android to confirm that frictionless downloads are  
10 only available in response to a proactive install decision taken by the user, but Mr. Cunningham  
11 testified that he “[REDACTED]  
12 [REDACTED].” (Cunningham Tr. 259:12-260:10.) Even if feasible, Google’s proposal would be  
13 unnecessarily costly and time-consuming to implement.

14 As an alternative to re-designing the operating system to create a new permission,  
15 Google could easily create parity by adding a confirmation screen to the Play Store install flow.  
16 The simplest way to do this would be to add a screen in the Play Store’s install flow that is  
17 identical to the “Do you want to install this app?” confirmation that is presented by Android  
18 when asked to install an app by a store with the REQUEST\_INSTALL\_PACKAGES  
19 permission. (Ernst Decl. ¶ 106.) This would be easy to implement because it would not require  
20 *any* changes to the Android operating system. (*Id.*)

21 This additional screen would not limit the Play Store’s competitiveness, because  
22 the Play Store and third-party stores would have identical screens in their install flows. Nor  
23 would it harm users, who could easily install apps by clicking the “Install” button in the Play  
24 Store and then confirm their consent with a single Android-generated dialog. That is how  
25 installation works today on iOS devices: users click the “Get” button in the App Store, and then  
26 the operating system confirms their consent. (Ernst Decl. ¶ 106.) In fact, the iOS install flow  
27 has another step, because iOS confirms the user’s identity. Even with the additional screen, the  
28 Play Store would still have a simpler install flow than iOS.

1 Adding a screen to the Play Store install flow can be accomplished with little cost  
2 and in little time. (Ernst Decl. ¶ 106.) Should Google nevertheless wish to pursue a more time-  
3 consuming and costly route, it could do so, provided it maintains install flow parity between the  
4 Play Store and competing stores. But the costs associated with Google’s implementation  
5 decision should not weigh against imposing this remedy, which can be achieved more efficiently.  
6 Nor should Google be allowed to delay while it pursues the more costly and complicated route.

7 **E. Google Should Not Charge for Third-Party App Store Distribution**

8 Recognizing that it would violate the Proposed Injunction, Google nonetheless  
9 argues that it should be entitled to charge for providing third-party app stores with distribution  
10 through the Play Store. Google argues that it would otherwise “be required to provide these  
11 valuable services to its competitors . . . for no compensation whatsoever.” (Proffer at 24.) That  
12 ignores the reason for this remedy. Google was found by the jury to have unlawfully excluded  
13 its competitors from the market for Android app distribution. Google should not be allowed to  
14 charge new fees for policies it is required to implement as a result of its violation of the law.

15 **F. The Costs Google Estimates in Connection with Distributing Third-Party  
16 Stores Are Unreliable and Need Not Be Incurred**

17 Google’s cost estimates for distributing third-party stores include unnecessary  
18 costs that should not be considered, *i.e.*, the cost to review apps in third-party stores and the cost  
19 to build a new consent screen warning users they are downloading an app store. Neither step  
20 should be permitted, so neither cost should be incurred.

21 Google’s estimated cost for reviewing apps on third-party stores is also unreliable.  
22 Mr. Kleidermacher [REDACTED]  
23 [REDACTED]. (Kleidermacher Tr. 166:21-167:3; *see also id.* at  
24 200:23 (acknowledging this figure is “[REDACTED]”).) Mr. Kleidermacher arrived at his  
25 estimate by summing five buckets of costs that he claims approximate the annual cost of app  
26 review for the Play Store, totaling \$ [REDACTED] million. (Kleidermacher Decl. ¶ 14; Kleidermacher Tr.  
27 163:25-164:20, 170:23-172:5.) The first of these five categories is in fact a sum of seven  
28 separate full-time equivalent (“FTE”) line items, representing the labor costs associated with app



review, that purportedly amount to a combined \$ [REDACTED] million. For some FTEs included in these seven line items, Mr. Kleidermacher accounted for [REDACTED]

[REDACTED]. (Kleidermacher Tr. 179:19-25,181:22-182:5.) Two of the five categories that make up Mr. Kleidermacher's estimate, which together add another \$ [REDACTED] million to the total estimated annual cost of app review, come with a disclaimer that "because we have never accounted for this before, it is imprecise." (Kleidermacher Decl. ¶ 14.) This collection of inaccurate inputs sums to a total of \$ [REDACTED] million in app review costs per year. (*Id.*)

Taking the already dubious estimate of \$ [REDACTED] million, Mr. Kleidermacher decided that it would be reasonable to assume that those costs would increase by 20 percent annually if Google decided to vet the apps in third-party stores, to the tune of more than \$ [REDACTED] million per year. (Kleidermacher Decl. ¶ 21.) He provides no basis for this assumption, and he concedes that many of the costs will not increase linearly. For example, he writes that the increase in growth of the App Safety team's costs is "not quite linear" (Kleidermacher Decl. ¶ 14; Kleidermacher Tr. 170:23-171:10.), yet he "[REDACTED]" (Kleidermacher Tr. 171:11-17). Instead, he used the same "[REDACTED]" of 20 percent across all the line items because he found it "[REDACTED]". (*Id.* at 187:23-188:11.) Thus, both the estimated \$ [REDACTED] million base cost and the 20 percent growth rate are entirely unfounded.

Google's remaining projected costs are inflated (*e.g.*, the costs of redesigning the Google Developer Console). As Dr. Ernst explains, the cost of enabling the distribution of third-party stores through the Play Store would be less than \$100K, and would take one month. (Ernst Decl. ¶ 113.)

### CONCLUSION

Google's Proffer suggests unnecessarily complicated methods of implementation that would hamper the remedy, and its costs and timeline estimates are unjustifiable.

1 Dated: July 24, 2024

2 Respectfully submitted,

3 By: /s/ Gary A. Bornstein  
4 Gary A. Bornstein

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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**  
**SAN FRANCISCO DIVISION**

**IN RE GOOGLE PLAY STORE  
ANTITRUST LITIGATION**

THIS DOCUMENT RELATES TO:

*Epic Games Inc. v. Google LLC et al.*,  
Case No. 3:20-cv-05671-JD

Case No. 3:21-md-02981-JD

**DECLARATION OF VITOR  
BACCETTI IN SUPPORT OF  
GOOGLE'S MOTION FOR PARTIAL  
STAY OF PERMANENT INJUNCTION  
PENDING APPEAL**

Judge: Hon. James Donato

**DECLARATION OF VITOR BACCETTI**

1  
2  
3 1. I am a Group Product Manager at Google. In that role, I am responsible for app  
4 distribution at Google Play. The facts set forth herein are within my personal knowledge and if  
5 called as a witness, I could and would competently testify to them.

6 2. In my declaration in support of Google's proffer regarding the technical  
7 implementation and anticipated resource allocation required for Epic's proposed remedies, I  
8 explained that:

- 9 a. the catalog-access remedy will require substantial resources to implement and  
10 large-scale updates across all apps in the Play store's app catalog on a regular  
11 basis. Given the immense risk that comes with allowing third-party app stores to  
12 access the Play store's catalog, Google would want to implement eligibility  
13 criteria for app stores who seek access to ensure that user safety and security is  
14 upheld.
- 15 b. Allowing for distribution of app stores within Google Play would require an  
16 overhaul of the Google Play store's design and functionality which would require  
17 enormous resources.

18 Dkt. 981-1.

- 19 3. I participated in the remedies hearing held on August 14, 2024.
- 20 4. I have reviewed the District Court's injunction (Dkt. 1017) as it relates to the  
21 remedies I discussed in my earlier declaration: catalog access and distribution of third-party  
22 stores through the Play store.

23 5. I offer this further declaration as my current analysis of the impact of  
24 implementing the injunction on Google Play, which has over half-a-million U.S. developers and  
25 over a hundred million U.S. users. Overall, although Google will do our best to deliver the

1 required projects on time, in my experience compressed deadlines like those that the Court has  
2 adopted can result in higher risks to users and developers because of unforeseen circumstances  
3 and the inability to iterate and test.

#### 4 Catalog Access

5 6. I understand that the District Court’s injunction requires Google to provide full  
6 Play catalog access to all third-party Android app stores (§ 11). The catalog-access remedy is  
7 resource intensive, requiring Google to (1) ensure that all developers with apps in the Play  
8 store’s catalog may opt out of Google’s distribution of the developer’s IP; (2) export and refresh  
9 metadata associated with the apps in the Play store’s catalog to participating app stores; (3) fulfill  
10 the install for any app downloaded in a third-party app store from the Play store catalog; and (4)  
11 develop a plan for subsequent updates of the app.

12 7. In its history, Google has never offered third-party app stores direct access to the  
13 Play store catalog. And I am not aware of any other app store on any platform that has ever  
14 offered such a service. Accordingly, as I explain further below, the injunction would require  
15 Google to design new systems, user interfaces, and APIs (application programming interfaces) to  
16 accomplish these tasks.

17 8. In addition, the District Court’s injunction raises security concerns. For example,  
18 despite Google’s request, the injunction does not appear to contain any provision concerning  
19 Google’s ability to vet third-party app stores, or otherwise set eligibility criteria, to ensure that  
20 only legitimate and safe app stores obtain access to the apps in Google’s catalog, which contains  
21 over 2 million apps in the United States. Google works hard to protect data from leaks and  
22 hackers, in part by implementing multiple layers of strong safeguards to protect developers’ data  
23 and intellectual property and end users from malicious actors.

24 9. In its remedies proffer (Dkt. 981-1 at 5-6), Google proposed to address this  
25 concern by establishing eligibility criteria for app stores requesting catalog access, including a



1 requirement that an app store has a minimum number of apps in its own catalog and the basic  
2 infrastructure to conduct app store business; a requirement that the app store forbid malware,  
3 pirated or unlocked apps, and other illegal content; a requirement that the app store has catalog  
4 review procedures in place to enforce those rules; and has agreed to terms of use with Google.

5 10. Without any eligibility criteria, any individual or entity could declare itself a  
6 “third party Android app store” and demand that Google share proprietary catalog data with that  
7 individual or entity and facilitate installation of every app in the Play store catalog from that  
8 individual or entity’s website or app, whether or not that website or app is a legitimate,  
9 operational app store in any sense.

10 11. Rather than a system under which app developers can “opt in” to this novel  
11 catalog access program (as Google requested in its remedies proffer), the District Court’s  
12 injunction mandates a developer “opt out” system. As Google explained in its remedies proffer,  
13 a developer opt out system is not sufficient to protect the intellectual property and reputational  
14 rights of app developers. Under such a system, Google would be required to allow any third-  
15 party app store (including app stores that traffic in malware or pirated apps or adult content) to  
16 list the developer’s app in its catalog unless and until the developer affirmatively opts out. This  
17 system places a burden on app developers to monitor the status of their apps on Play.

18 12. I have reviewed my original estimates on the resources required for timing and  
19 implementation in light of the injunction’s requirement that Google adopt this feature in 8  
20 months and would apply only in the United States. *See* Dkt. 981-1 at 7-10.

21 13. I believe that the number of personnel required is largely unchanged, except that  
22 we would not create a mechanism for more frequent updates or engage in onboarding of stores to  
23 the same degree. *See* Dkt. 981-1 at 8-10. Additionally, the ongoing maintenance would last 3  
24 years. *See id.* I do not believe that these reductions in the scope of the work will have any  
25 impact on the timing of the project, because the remainder of the work will be occurring in

1 parallel. Additionally, limiting the features to only the United States adds some modest  
2 complexity to the project, but should not materially add to the required resources.

3 14. An important part of the catalog sharing program would be the integration of  
4 third-party stores with the APIs that Google implements to perform the catalog sharing function.  
5 This integration is the “onboarding of stores” component of the project that I discuss in the  
6 previous paragraph. In light of the compressed timeline, Google is unlikely to have a robust  
7 mechanism, process, and documentation program for this integration in place on the effective  
8 date. This will likely slow the overall rollout and likely require app stores to be onboarded to  
9 participate in the program on a phased basis rather than all at once.

10 15. To meet the deadline set by the injunction, Google must immediately begin  
11 spending a significant portion of the resources required to implement catalog sharing. *See* Dkt.  
12 981-1 at 8-10; Dkt. 982-3 at 3-5.

13 **Distribution of Third-Party Stores Through Play**

14 16. I understand that the District Court’s injunction requires Google to distribute  
15 third-party app stores on Play.

16 17. As I explained in a declaration filed with the remedies proffer (Dkt. 981-1 at 10-  
17 15), this remedy will likely involve making significant changes to the Play store’s design. The  
18 Play store as it exists today is designed to safely distribute apps, not app stores. To implement  
19 the remedy proposed in Epic’s injunction, Google would have to develop new flows in the Play  
20 Developer Console to allow developers to declare an app store, agree to abide by Play store  
21 policies for the apps that it carries, and accept additional terms of service. For reference, the  
22 currently operative Developer Distribution Agreement, to which all developers of apps must  
23 adhere, is attached as **Exhibit A**.

24 18. Google needs to determine whether and how it must make changes across many  
25 surfaces in the Play Developer Console to add support for app stores. It must also determine

1 whether and how to create new Play store surfaces to handle the display of app stores within the  
2 store as well, and design mechanisms for Play store users to identify what is an app store and  
3 make changes across the Play Store surfaces to support this. In addition, Google needs to  
4 consider and develop a charging model for third-party app stores, and would likely build and  
5 implement a warning that advises users when they are about to install an app store given that app  
6 stores have certain permissions on a device that regular apps do not.

7 19. Google also needs to determine the eligibility and security criteria to apply for  
8 app stores to be distributed through the Play store, and determine the human processes and  
9 technology to monitor and enforce compliance with those rules. This includes policies relating  
10 to inappropriate or illegal content, piracy and impersonation, and malware, among others things.

11 20. I have reviewed my original estimates on the resources required for timing and  
12 implementation in light of the injunction's requirement that Google adopt this feature in 8  
13 months and would apply only in the United States. *See* Dkt. 981-1 at 12-15.

14 21. I believe that the number of personnel required is largely unchanged, except that  
15 the ongoing maintenance would last only 3 years and the period for the app store review program  
16 launch would likely be shorter. *See* Dkt. 981-1 at 14-15. I do not believe that these reductions in  
17 the scope of the work will have any impact on the timing of the project, because the remainder of  
18 the work will be occurring in parallel. Additionally, limiting the features to only the United  
19 States adds some modest complexity to the project, but geographic limitations are generally  
20 familiar to the Play store and should not materially add to the required resources.

21 22. I believe that the compressed timeline described in the previous paragraph will  
22 result in less time to design the user interface and user experience involved in hosting third-party  
23 app stores. In particular, the injunction's timeline will result in less time for planning and  
24 iteration before the engineering work must begin, and less time to receive feedback from partners  
25



1 during the testing phase. I believe that the final product will be lower quality as a result of the  
2 compressed timeline and carry higher risk to users and developers as a result.

3 23. To meet the deadline set by the injunction, Google must immediately begin  
4 spending a significant portion of the resources required to implement catalog porting. *See* Dkt.  
5 981-1 at 12-15; Dkt. 982-3 at 5-8.

6  
7 I declare under penalty of perjury that the foregoing is true and correct. Executed on this  
8 11th day of October 2024 in New York, New York.

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Signed by:  
Vitor Baccetti  
EC0C8210DED54DC  
Vitor Baccetti

## **EXHIBIT A**



Google Play

# Google Play Developer Distribution Agreement

Effective as of February 5, 2024 ([view archived version](#))

## 1. Definitions

**Authorized Provider:** A third-party non-Google entity authorized by Google to provide services that enable Developers to receive payments for Products that are sold to users of Devices via Google Play.

**Brand Features:** The trade names, trademarks, service marks, logos, domain names, and other distinctive brand features of each party, respectively, as owned (or licensed) by such party from time to time.

**Developer or You:** Any person or company who provides Products for distribution through Google Play in accordance with the terms of this Agreement.

**Developer Account:** A publishing account issued to a Developer in connection with the distribution of Developer Products via Google Play.

**Device:** Any device that can access Google Play.

**Google:** Google LLC, a Delaware limited liability company with principal place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043, United States; Google Ireland Limited, a company incorporated in Ireland with principal place of business at Gordon House, Barrow Street, Dublin 4, Ireland; Google Commerce Limited, a company incorporated in Ireland with principal place of business at Gordon House, Barrow Street, Dublin 4, Ireland; or Google Asia Pacific Pte. Limited, a company incorporated in Singapore with principal place of business at 70 Pasir Panjang Road, #03-71, Mapletree Business City, Singapore 117371. Google may update the Google entities and their addresses from time to time.

**Google Play:** The software and services, including the Play Console, which allow Developers to distribute Products to users of Devices.



**Intellectual Property Rights:** All patent rights, copyrights, trademark rights, rights in trade secrets, database rights, moral rights, and any other intellectual property rights (registered or unregistered) throughout the world.

**Payments Profile:** A financial service account or profile provided by a Payment Processor to a Developer that enables a Payment Processor to collect and remit payments to the Developer on the Developer's behalf for Products sold via Google Play.

**Payment Processor(s):** A Google-affiliated entity providing services that enable Developers to receive payments for Products sold via Google Play.

**Play Console:** The Google Play Console and other online tools or services provided by Google to developers at <https://play.google.com/apps/publish>, as may be updated from time to time. The Play Console is also available through an app to developers.

**Products:** Software, content, digital materials, and other items and services as made available by Developers via the Play Console.

**Taxes:** All government-imposed charges, including taxes, duties, imposts, and withholdings. The term Taxes excludes communication taxes and similar fees and surcharges; property taxes; and taxes based on each Party's net income, franchise taxes, business and occupation taxes, and other similar tax types. Each Party is responsible for its own net income taxes. For the avoidance of doubt, the term Taxes includes Transaction Taxes.

**Transaction Taxes:** Any Taxes that are imposed on the purchase price or cost of goods or services, including value-added taxes (VAT), goods and services taxes (GST), sales taxes, government levies and transfer taxes.

## 2. Accepting this Agreement

2.1 This agreement ("**Agreement**") forms a legally binding contract between You and Google in relation to Your use of Google Play to distribute Products. You are contracting with the applicable Google entity based on where You have selected to distribute Your Product (as set forth [here](#)). You acknowledge that Google will, solely at Your direction, and acting pursuant to the relationship identified in Section 3.1, display and make Your Products available for viewing, download, and purchase by users. In order to use Google Play to distribute Products, You accept this Agreement and will provide and maintain complete and accurate information in the Play Console.

2.2 Google will not permit the distribution of Your Products through Google Play, and You may not accept the Agreement, unless You are verified as a Developer in good standing.

2.3 If You are agreeing to be bound by this Agreement on behalf of Your employer or other entity, You represent and warrant that You have full legal authority to bind Your employer or such entity to this Agreement. If You do not have the requisite authority, You may not accept the Agreement or use Google Play on behalf of Your employer or other entity.

### 3. Commercial Relationship, Pricing, Payments, and Taxes

3.1 You hereby appoint Google as Your agent or marketplace service provider as outlined [here](#) to make Your Products available in Google Play, and subject to the terms and conditions of this Agreement, Google will allow You to use Google Play for Your Products.

3.2 This Agreement covers both Products that users can access for free and Products that users pay a fee to access. In order for You to charge a fee for Your Products and to be paid for Products distributed via Google Play, You must have a valid Payments Profile under a separate agreement with a Payment Processor, be approved by a Payment Processor for a Payments Profile, and maintain that profile in good standing. If there is a conflict between Your Payment Processor agreement and this Agreement, the terms of this Agreement will apply.

3.3 Products are displayed to users at prices You establish in Your sole discretion. If You utilize Google Play's billing system or the Play Console to control settings related to any taxes (including taxes, fees, or surcharges that are outside the scope of this Agreement) on the sale of Products, or if Google believes that Taxes may be owed by You or Google on the sale of Products, You grant Google permission to charge, collect, and discharge any such taxes as required in accordance with applicable law. For the avoidance of doubt, You remain responsible for any such taxes, fees, or surcharges, including as provided under Section 3.5. You may set the price for Your Products in the currencies permitted by Google, the Payment Processor, and, where applicable, the Authorized Provider. Google may display the price of Products to users in their native currency, but Google is not responsible to You for the accuracy of currency rates or currency conversion.

3.4 Acting as Your agent, and with You acting as a principal, Google is the merchant of record for Products sold or made available to users in the countries/territories described [here](#). You are the merchant of record for Products You sell or make available via Google Play to all other users. The sales price You set for Products will determine the amount of payment You will receive. A "**Service Fee**", as set forth [here](#) (as may be revised by Google with notice to You in accordance with Section 15), will be calculated and charged on the sales price. The Service Fee is exclusive of Transaction Taxes of any and all kinds required by any applicable governmental tax authority to be charged, and Google is entitled to the Service Fee without reduction for any taxes or government levies, including any Taxes applicable to transactions described under Section 3.5 or Section 3.6. As per applicable law, to the extent Google is responsible to discharge Transaction Taxes arising on Service Fees, Google will charge You such Transaction Taxes, and You are responsible for paying



any Transaction Taxes arising on the Service Fee. More information about the Service Fee can be found [here](#).

3.5 Except in certain countries/territories and subject to certain conditions as described [here](#) (which may be updated with notice to You), You are responsible for Transaction Taxes on the sale or provision of Products to users, including (but not limited to): (a) determining if the transaction is taxable; (b) charging and collecting the Transaction Taxes at the applicable rate; (c) remitting the Transaction Taxes to the applicable governmental tax authority; and (d) providing any required documentation to the user or applicable governmental tax authority. You are solely responsible for providing and maintaining accurate inputs that impact taxes on Products, including for any tax categorization of Products. Any adjustments that You make to the tax categorization of Products will take effect only for future sales of Products. Google will determine whether Google, the Payment Processor, or the Authorized Provider is obligated to collect or remit any Transaction Taxes in respect of any transaction and such Transaction Taxes may be recovered from You, deducted from payment due to You, or recovered from the user. Where Google collects and remits Transaction Taxes in applicable countries/territories, You may recognize a deemed supply from You to Google solely for Transaction Tax purposes if required by applicable law. You will be solely responsible for any Tax obligations arising from such deemed supply.

3.6 Where the Authorized Provider notifies Google that it or another Authorized Provider is required by applicable (local) legislation or by the applicable governmental tax authority to declare, charge, deduct, or withhold any taxes on a sale of Your Products, or where Google or a Payment Processor reasonably determines that it is required by applicable (local) legislation or by the applicable governmental tax authority to declare, charge, deduct, or withhold any taxes (in each case, **"Withholding Taxes"**), Google will also deduct the amount of such Withholding Taxes from the amount Google remits to You. Withholding Taxes include, but are not limited to, withholding tax obligations on cross-border payments or imposed by telecommunications taxes. You agree to timely provide, as soon as reasonably practicable, any tax documentation or certification requested by Google. Unless You are a resident of the United States or Singapore for income tax purposes, You hereby certify that any services that You provide to users through Your Product are not performed in the United States or Singapore, and furthermore You agree to provide written notification to Google at least ninety (90) days prior to any such services being performed in the United States or Singapore. Written notification on change in service location may be emailed to [play-tax-notices@google.com](mailto:play-tax-notices@google.com).

3.7 You may also choose to make Products available for free. If the Product is free, You will not be charged a Service Fee. To avoid unexpected fees for users, You agree that Products that were initially offered free of charge to users will remain free of charge. Any additional charges will correlate with an alternative or supplemental version of the Product.



3.8 You authorize Google to give users refunds in accordance with the Google Play refund policies as located [here](#) or the local versions made available to You, and You agree that Google may deduct the amount of those refunds from payments to You. In all other respects, the Payment Processor's standard terms and conditions regarding refunds will apply. User refunds may be exclusive of taxes previously charged to users for Product purchases.

3.9 Users are allowed unlimited reinstalls of each Product distributed via Google Play without any additional fee, provided however, that if You remove any Product from Google Play due to a Legal Takedown (as defined in Section 8.2), that Product will be removed from all portions of Google Play, and users will no longer have a right or ability to reinstall the affected Product.

## 4. Use of Google Play by You

4.1 You and Your Product(s) must adhere to the [Developer Program Policies](#).

4.2 You are responsible for uploading Your Products to Google Play, providing required Product information and support to users, and accurately disclosing the permissions necessary for the Product to function on user Devices.

4.3 You are responsible for maintaining the confidentiality of any developer credentials that Google may issue to You or that You may choose Yourself, and You are solely responsible for all Products that are developed under Your developer credentials. Google may limit the number of Developer Accounts issued to You or to the company or organization You work for.

4.4 Except for the license rights granted by You in this Agreement, Google agrees that it obtains no right, title, or interest from You (or Your licensors) under this Agreement in or to any of Your Products, including any Intellectual Property Rights in those Products.

4.5 You may not use Google Play to distribute or make available any Product that has a purpose that facilitates the distribution of software applications and games for use on Android devices outside of Google Play.

4.6 You agree to use Google Play only for purposes that are permitted by this Agreement and any applicable law, regulation, or generally accepted practices or guidelines in the relevant jurisdictions (including any laws regarding the export of data or software to and from the United States or other relevant countries).

4.7 Users are instructed to contact You concerning any defects or performance issues in Your Products and You are responsible for undertaking or handling the support and maintenance of Your Products and any complaints about Your Products. You agree to supply and maintain valid and accurate contact information that will be displayed in each of Your Products' detail page and made available to users for customer support and legal purposes. For Your paid Products or in-app

transactions, You agree to respond to customer support inquiries within 3 business days, and within 24 hours to any support or Product concerns stated to be urgent by Google.

4.8 You agree that if You make Your Products available through Google Play, You will protect the privacy and legal rights of users. If the users provide You with, or Your Product accesses or uses, usernames, passwords, or other login information or personal information, You agree to make the users aware that the information will be available to Your Product, and You agree to provide legally adequate privacy notice and protection for those users. Further, Your Product may only use that information for the limited purposes for which the user has given You permission to do so. If Your Product stores personal or sensitive information provided by users, You agree to do so securely and only for as long as it is needed. However, if the user has opted into a separate agreement with You that allows You or Your Product to store or use personal or sensitive information directly related to Your Product (not including other products or applications), then the terms of that separate agreement will govern Your use of such information. If the user provides Your Product with Google Account information, Your Product may only use that information to access the user's Google Account when, and for the limited purposes for which, the user has given You permission to do so.

4.9 You will not engage in any activity with Google Play, including making Your Products available via Google Play, that interferes with, disrupts, damages, or accesses in an unauthorized manner the devices, servers, networks, or other properties or services of any third party including, but not limited to, Google or any Authorized Provider.

4.10 You are solely responsible for, and Google has no responsibility to You for, Your Products, including use of any Google Play APIs and for the consequences of Your actions, including any loss or damage which Google may suffer.

4.11 Google Play allows users to rate and review Products. Only users who download the applicable Product will be able to rate and review it on Google Play. For new Developers without Product history, Google may use or publish performance measurements such as uninstall and/or refund rates to identify or remove Products that are not meeting acceptable standards, as determined by Google. Google reserves the right to display Products to users in a manner that will be determined at Google's sole discretion. Your Products may be subject to user ratings and reviews to which You may not agree. If you have concerns regarding such ratings and reviews, you may report it via the Play Console.

## 5. Authorizations

5.1 Upon making Your Product available on Google Play, You authorize Google on a non-exclusive, worldwide, and royalty-free basis to: reproduce, perform, display, analyze, and use Your Products in connection with (a) the operation and marketing of Google Play; (b) the marketing of devices and services that support the use of the Products and the marketing of the Products on Google Play



and Devices; (c) the provision of hosting services to You and on Your behalf to allow for the storage of and user access to the Products and to enable third -party hosting of such Products; (d) making improvements to Google Play, Play Console, and Android platform; and (e) checking for compliance with this Agreement and the Developer Program Policies. The authorization in clause (e) is sublicensable to application security partners for the sole purpose of checking for compliance with this Agreement and the Developer Program Policies. You also authorize such application security partners to use the results of their review in their products and research that may be publicly available. For clarity, the authorizations provided under this Section will cease upon termination of the Agreement.

5.2 You authorize Google to perform the acts described in this section subject to Your control and direction in the manner indicated in the Play Console.

5.3 You grant to the user a nonexclusive, worldwide, and perpetual license to perform, display, and use the Product. The user may include, but is not limited to, a family group and family members whose accounts are joined together for the purpose of creating a family group. Family groups on Google Play will be subject to reasonable limits designed to prevent abuse of family sharing features. Users in a family group may purchase a single copy of the Product (unless otherwise prohibited, as for in-app and subscription Products) and share it with other family members in their family group. If, in the Play Console, You opt in to allowing users to share previously purchased Products, Your authorization of sharing of those purchases by those users is subject to this Agreement. If You choose, You may include a separate end user license agreement (“**EULA**”) in Your Product that will govern the user’s rights to the Product, but, to the extent that EULA conflicts with this Agreement, this Agreement will supersede the EULA. You acknowledge that the EULA for each of the Products is solely between You and the user. Google will not be responsible for, and will not have any liability whatsoever under, any EULA.

## 6. Brand Features and Publicity

6.1 Each party will own all right, title, and interest, including, without limitation, all Intellectual Property Rights, relating to its Brand Features. Except to the limited extent expressly provided in this Agreement, neither party grants, nor will the other party acquire, any right, title, or interest (including, without limitation, any implied license) in or to any Brand Features of the other party.

6.2 Subject to the terms and conditions of this Agreement, Developer grants to Google and its affiliates a limited, nonexclusive, royalty-free license during the term of this Agreement to display Developer Brand Features, submitted by Developer to Google, for use solely within Google Play, online or on Devices and in each case solely in connection with the distribution and sale of Developer's Product via Google Play or to otherwise fulfill its obligations under this Agreement.



6.3 In addition to the license granted in Section 6.2 above, for purposes of marketing the presence, distribution, and sale of Your Product via Google Play and its availability for use on Devices and through other Google services, Google and its affiliates may include visual elements from Your Product (including characters and videos of game play) and Developer Brand Features (a) within Google Play, on Devices, and in any Google-owned online or mobile properties; (b) in online, mobile, television, out of home (e.g. billboard), and print advertising formats outside Google Play; (c) when making announcements of the availability of the Product; (d) in presentations; and (e) in customer lists which appear either online or on mobile devices (which includes, without limitation, customer lists posted on Google websites).

6.4 Google grants to Developer a limited, nonexclusive, worldwide, royalty- free license to use the Android Brand Features for the term of this Agreement solely for marketing purposes and only in accordance with the Android Brand Guidelines.

6.5 If this Agreement is terminated for any reason in accordance with Section 10, or if You discontinue the distribution of specific Products via Google Play, Google will cease use of the discontinued Products' Brand Features pursuant to this Section 6, except as necessary to allow Google to effectuate reinstalls by users.

## 7. Promotional Activities

7.1 Google may run promotional activities offering coupons, credits, and/or other promotional incentives for paid transactions and/or user actions for Your Products and in-app transactions solely in connection with Google Play promotions and, for gift card promotions, also on Google authorized third-party channels ("**Promotion(s)**"), provided that (a) amounts payable to You will not be impacted; (b) there will be clear communication to users that the Promotion is from Google and not You; (c) the prices You establish will be clearly communicated to users; (d) any redemption of the Promotion will be fulfilled by Google or, for gift card Promotions, through a Google authorized third party; and (e) Google will be responsible for compliance with applicable law for the Promotion. To the extent prohibited by applicable law, Google will not condition or otherwise withhold Promotions, featuring, or marketing, based on whether You prioritize distributing Your apps on Google Play before other Android app stores.

7.2 In addition to the rights granted in Section 6, You grant Google the right to use Your Brand Features (in the form and manner provided by You) for purposes of marketing Promotions in connection with Google Play and, for gift card Promotions, on Google authorized third-party channels; provided however, that Google will only use Brand Features owned by You on authorized third- party channels.

## 8. Product Takedowns